

**IN THE UNITED STATES DISTRICT COURT  
FOR THE NORTHERN DISTRICT OF CALIFORNIA**

MIYOKO'S KITCHEN,

*Plaintiff,*

v.

KAREN ROSS, in her official capacity as  
Secretary of the California Department of Food  
and Agriculture, and STEPHEN BEAM, in his  
official capacity as Branch Chief of the Milk  
and Dairy Food Safety Branch,

*Defendants.*

Case No. 3:20-cv-893-RS

Declaration of Nicole Negowetti,  
Clinical Instructor and Lecturer on Law  
with the Harvard Animal Law and  
Policy Clinic

1 **I, Nicole Negowetti, declare as follows:**

2

3 1. I am the Clinical Instructor of the Harvard Animal Law and Policy Clinic (ALPC). I

4 have taught at Harvard Law School for four years and have twelve years of policy work and

5 experience in food regulation. Prior to my position at Harvard Law, I served as Policy Director at the

6 Good Food Institute and was an Associate Professor at Valparaiso University School of Law, where

7 I taught courses on food law, agricultural law, and sustainability. I also teach Food Law & Regulation

8 at the Tufts Friedman School of Nutrition Science & Policy, currently serve on the Food and Drug

9 Law Journal's Editorial Advisory Board and am a founding member of the Academy of Food Law

10 & Policy.

11 2. The Animal Legal Defense Fund (ALDF) contacted ALPC to seek expert opinion on

12 this case. In particular, ALDF asked ALPC to provide expertise regarding compliance with the

13 federal Food, Drug and Cosmetic Act; FDA's standards of identities; and plant-based dairy products'

14 labels, marketing claims, and naming conventions. I have researched, written, and presented

15 extensively on these topics.

16 3. I have personal knowledge of the facts set forth herein, except as those stated on

17 information and belief. As to those, I am informed and believe them to be true. If called as a witness,

18 I could and would competently testify to the matters stated herein. Neither I nor ALPC is being

19 compensated by ALDF for providing expert consultation or for producing this declaration.

## 20 **I. Expert Qualifications**

21

22 4. I am an attorney and clinical instructor with expertise in the area of food policy and

23 FDA regulations. For the past ten years, the majority of my work has focused on FDA enforcement,

24 regulations, and state- and federal-policy related to food products within the United States. I have

25 specific experience relating to FDA labeling regulations towards plant-based foods and I have

26 presented this work to the FDA. In addition, I have presented the findings from my work at numerous

27 meetings and conferences, to both academic and industry audiences. Other research projects I've

---

28 **DECLARATION – NICOLE NEGOWETTI**

Case No. 3:20-cv-893-RS

1 worked on include consumer perception studies and multiple investigations designed to understand  
2 and improve consumer understanding of food labeling conventions and claims.

3 5. In my past role as Director of Policy at The Good Food Institute (GFI), I submitted a  
4 citizen petition to FDA requesting that FDA recognize the use of well-established common and usual  
5 compound nomenclatures for food.

6 6. My qualifications to give opinions in this matter are set out in detail in my Curriculum  
7 Vitae, attached to this Declaration. Some of my significant experience and publications related to  
8 this topic include:

- 9 • *Planetary Health Approach to the Labeling of Plant-Based Meat*, 75 J. FOOD &  
10 DRUG LAW 142 (2020).
- 11 • *Taking (Animal-Based) Meat and Ethics Off the Table: Food Labeling and the Role*  
12 *of Consumers as Agents of Food Systems Change*, 99 OREGON L. REV. 101 (2020).
- 13 • *Scientific, Sustainability, and Regulatory Challenges of Cultured Meat*, 1 NATURE  
14 FOOD 403 (July 2020).
- 15 • *Ten Years Post-GAO Assessment, FDA Remains Uninformed of Potentially Harmful*  
16 *GRAS Substances in Foods*, 1(9) CRIT. REV. FOOD SCI. NUTR. (Apr. 2020).
- 17 • *Opening the Barnyard Door: Transparency and the Resurgence of Ag-Gag and*  
18 *Veggie Libel Laws*, 38 SEATTLE U. L. REV. 1345 (2015).
- 19 • *A National "Natural" Standard for Food Labeling*, 65 MAINE L. REV. 582 (Feb.  
20 2013).
- 21 • Policy Paper, *Food Labeling Litigation: Exposing Gaps in the FDA's Resources and*  
22 *Regulatory Authority*, Brookings Inst. (July 2014).
- 23 • Panelist, Harvard T.H. Chan School of Public Health, *Red Meat, Meat Alternatives,*  
24 *and Beyond*, Regulatory, policy, and food system applications of red meat and meat  
25 alternatives (Jan. 27, 2020).
- 26 • "Modernizing Food Labeling: The Narratives of Food Innovation and Deciphering  
27 Mixed Messages," Food and Drug Law Journal Symposium: Going Viral:  
28 Safeguarding Public Health in the Modern Era, Food and Drug Law Institute  
(November 15, 2019).
- "Legal and Regulatory Issues Surrounding Emerging Meat Alternatives," American  
Institute of Chemical Engineers, Emerging Meat Alternatives Conference  
(November 2, 2019).

---

DECLARATION – NICOLE NEGOWETTI

Case No. 3:20-cv-893-RS

- “War Over Words: Plant-Based, Cellular, and Novel ‘Meats’ and ‘Dairy’ Products,” Food Law and Drug Institute, Food Advertising, Labeling, and Litigation Conference: For the Food and Dietary Supplement Industries (September 26, 2019).

7. The Harvard ALPC is a clinical program at Harvard Law School that provides law students with hands-on experience in animal advocacy on behalf of both captive animals and wildlife, including litigation, legislation, administrative practice, and policymaking.

8. Part of the work of the ALPC has included drafting public comments and testifying at an FDA hearing regarding food labeling and regulatory enforcement issues surrounding standards of identity for dairy and plant-based dairy products. ALPC has submitted comments in response to FDA Docket No. FDA-2018-N-2381, requesting comments on FDA’s “Horizontal Approaches to Food Standards of Identity Modernization.” (Attached as Exhibit 2.)

9. ALPC has reviewed FDA warning letters, proposed and final FDA regulations, published cases, court pleadings, and approximately 40 comments in response to FDA’s request for public comment on standards of identity. ALPC participated in the FDA hearing on September 27, 2019 to provide in-person testimony regarding the same.

10. In September 2019, ALPC testified at an FDA meeting entitled “Horizontal Approaches to Food Standards of Identity Modernization,” which sought input from the public on FDA’s efforts to update standards of identity for food products. With my oversight, ALPC students urged the FDA to “continue its long-standing practice of allowing food labels to refer to the names of standardized foods such as milk so long as qualifying language such as ‘almond’ or ‘soy’ is included to make the product’s ingredients and intended use clear to consumers.” This approach allows for flexibility in food labeling in the interests of both consumers and food innovation.<sup>1</sup>

11. Further, Clinic students testified that “[c]onsumers are not confused by product labels with modified names of standardized foods such as rice noodles, gluten-free bread, and almond butter,” and argued that appropriately qualified food labels are a form of commercial speech

---

<sup>1</sup> FDA transcript from Public Meeting on Horizontal Approaches to Food Standards of Identity Modernization (Sept. 27, 2019) testimony by Gabriel Wildgen, *available for download at* <https://www.fda.gov/media/132401/download>

protected under the First Amendment. Because there is no reasonable public health or consumer confusion argument to justify restricting terms such as “milk” to only cows’ milk or “noodles” to only wheat noodles, students testified that the FDA does not have a legally substantial interest in doing so.

## II. Summary of Testimony

12. This Declaration addresses the following points:

A. The federal Food, Drug and Cosmetic Act neither warrants nor necessitates CDFA’s enforcement posture.

B. Through past practices and consistent nonenforcement, FDA has taken the position that dairy standards do not apply to plant-based dairy products.

C. Naming conventions used by plant-based dairy products do not run afoul of FDA’s standards of identity for animal dairy products.

D. Current naming conventions and representations for plant-based products like Miyoko’s do not mislead consumers.

E. Recent state and federal legislative efforts to prevent plant-based products from using traditional dairy terms are pretextual efforts to appease the dairy industry.

## III. Bases for Testimony

13. In preparing this Declaration, I reviewed papers and presentations authored by my colleagues and myself, and past regulatory comments including ALPC’s comments to FDA.

## IV. Testimony

### A. The federal Food, Drug and Cosmetic Act neither warrants nor necessitates CDFA’s enforcement posture.

14. As explained below, the federal Food, Drug, and Cosmetic Act (FDCA) preempts state food-labeling laws in only a few limited respects. Generally, the FDA’s regulations generally

1 allow food producers to use the “common or usual name”—also called a “statement of identity”—  
2 of a product. Under this regulatory scheme, the FDA’s standards of identity (which are food  
3 definitions that essentially provide recipes for what ingredients certain foods must contain or how  
4 they must be produced) for dairy products like “butter” and “milk” do not bar plant-based dairy  
5 producers, like Miyoko’s here, from using such terms—a conclusion that is borne out by the long  
6 history of FDA nonenforcement against these naming conventions.

7  
8 15. Through the FDCA, the FDA regulates countless aspects of labels and labeling for  
9 food products, including plant-based dairy products. The FDCA sets out certain laws and regulations  
10 governing what information must be contained on labels, what claims companies can make for their  
11 products, and even has an overarching provision prohibiting any labels or labeling that is “false or  
12 misleading” to consumers. While the FDCA provides a comprehensive food labeling scheme, its  
13 provisions do not extend to marketing for food products beyond product labels and accompanying  
14 materials—for example, it does not cover company’s websites or social-media marketing. Neither  
15 does the FDCA prevent states from adopting their own food regulatory scheme to the extent it does  
16 not run afoul of the FDCA’s express preemption provision.

17 16. That provision, codified at 21 U.S.C. § 343-1(a), provides a limited and specific list  
18 of twelve subjects on which the federal standards will preclude enforcement of state laws that are  
19 “not identical” to federal requirements. To illustrate, states may not impose a standard of identity for  
20 a food that is already subject to an FDA standard of identity, unless the state standard is identical to  
21 the federal standard. This preemption provision does not prevent states from adopting different or  
22 additional requirements beyond those covered by 21 U.S.C. 343-1(a). In fact, Congress and the FDA  
23 have both recognized that “the only State requirements that are subject to preemption are those that  
24 are affirmatively different on matters that are covered by section [343-1] of the act.” 58 Fed. Reg.  
25 2462 (1993) (emphasis added).

26 17. 21 U.S.C. § 343(i)(1) requires food labels to include the “common or usual name,” or  
27 statement of identity, of the food. Regulations governing the “common or usual name” of foods—or  
28 their statements of identity—leave the exact names up to food companies, so long as they describe

1 to consumers the nature and contents of the product with “[a]n appropriately descriptive term, or  
 2 when the nature of the food is obvious, a fanciful name commonly used by the public for such food.”  
 3 21 C.F.R. 101.3(2) & (3). Under the preemption provision just discussed, states may not impose a  
 4 requirement that differs or conflicts with this requirement in section 343(i)(1). Thus, as relevant here,  
 5 under the FDCA, a state-law claim or regulatory enforcement action against a product label is not  
 6 permitted when that label complies with 21 C.F.R. §§ 102.5—the FDA regulation that addresses  
 7 “common or usual names” generally. Here, the product name “cultured vegan butter,” does comply  
 8 with those regulations.

9 18. Beyond this narrow express preemption provision, states may promulgate different or  
 10 additional food labeling regulations. Most states, including California, have adopted their own food  
 11 labeling law (in California this is the Sherman Law,<sup>2</sup> found at Cal. HSC sec. 109875). However,  
 12 states must refrain from enforcement that implicates expressly preempted requirements under the  
 13 FDCA—especially when it involves a state’s (mis)interpretation of one such section in a way  
 14 unsupported by any FDA enforcement action or guidance. That is the case with respect to plant-  
 15 based dairy producers. In the seven decades since dairy standards of identity have been on the books,  
 16 and in the approximately 40 years that plant-based dairy products like soymilk, coconut milk, and  
 17 vegan cheese have been on shelves, FDA has never taken the position that plant-based dairy  
 18 statements of identity cannot include dairy terms that subject to standards of identity (like “milk”  
 19 and “butter”).

20  
 21 **B. Through past practices and consistent nonenforcement, the FDA has taken the**  
 22 **position that dairy standards do not apply to plant-based dairy products.**

23 19. Historically, the FDA has not consistently enforced food standards of identities and  
 24 has often created regulatory workarounds to avoid enforcing standards of identities. Since the early  
 25 1900s, the FDA has been charged with implementing food label regulations to protect consumers  
 26 from purchasing misbranded goods.<sup>3</sup> Yet even after the FDA began regulating labels, consumers

---

27 <sup>3</sup> Michelle A. Parisi et al., *US Federal Laws Affecting Food Labeling*, in GUIDE TO US FOOD LAWS AND

were still often swindled into purchasing foods with degraded or missing ingredients. In order to prevent such consumer fraud, Congress passed the FDCA in 1938, establishing a regulatory scheme for preventing adulterated and misbranded food, drugs, medical devices, and cosmetics.<sup>4</sup> Although it has been amended over the years, the FDCA is still the main food labeling law today. Such government regulation of food labels has made it harder for producers to conceal ingredients and easier for consumers to know what they are buying. The FDCA gives the FDA broad discretion to create definitions for food in order to “promote honesty and fair dealing in the interest of consumers.”<sup>5</sup> These food definitions are designated by law or regulation and are known as “standards of identity.”<sup>6</sup>

20. Most of today’s existing standards of identity were established through rulemakings between the 1950s and 1970s.<sup>7</sup> As innovative foods hit the market, the FDA has taken a less active regulatory approach to the FDCA. For example, in the 1970s, the FDA decided that it would sometimes be “necessary” to include one food name within another “to provide the consumer with accurate, descriptive, and fully informative labeling.”<sup>8</sup> Later, in 1983, the FDA decided that for “substitute” foods (*i.e.*, “foods made in semblance” to foods that have a standard of identity), it is “reasonable and appropriate” to utilize a standardized food name, if “the name of the food [is] modified such that the nature of the substitute food is clearly described and is clearly distinguished

---

REGULATIONS 97, 97 (Patricia A. Curtis, ed., 2013).

<sup>4</sup> 21 U.S.C. § 341 (2018).

<sup>5</sup> *Id.*

<sup>6</sup> 21 C.F.R. § 101.3(b)(1) (2018).

<sup>7</sup> Andrea Kraus, Ph.D., *Standards of Identity History & Current Status*, Center for Food Safety & Applied

Nutrition, U.S. Food & Drug Admin., Sept. 27, 2019, *available at* <https://www.fda.gov/food/workshops-meetings-webinars-food-and-dietary-supplements/public-meeting-horizontal-approaches-food-standards-identity-modernization-09272019-09272019#event-materials>.

<sup>8</sup> 44 Fed. Reg. 3,964, 3,965 (Jan. 19, 1979), *quoting* 38 Fed. Reg. 20,702, 20,703 (Aug. 2, 1973).



1 from the food which it resembles and for which it is intended to substitute.”<sup>9</sup> Thus, the FDA has  
2 repeatedly acknowledged the need for increased flexibility with standardized food terms and has  
3 come up with legal workarounds in order to keep up with food product innovation.

4         21. Congress likewise indicated its intention to better protect consumers while still  
5 promoting food innovation when it passed the 1990 Nutrition Labeling Education Act (NLEA). The  
6 NLEA requires nutrition and ingredient information on food labels to ensure consumers are informed  
7 of food ingredients and are not misled into purchasing inferior products.<sup>10</sup> One of the primary goals  
8 of the NLEA is “to encourage product innovation through the development and marketing of  
9 nutritionally-improved foods.”<sup>11</sup> Today, the need for nutrition fact panels and ingredient statements  
10 remains, and they continue to provide consumers with information to select the foods that best fit  
11 their preferences and needs.

12         22. Under the NLEA, the FDA promulgated a new regulation<sup>12</sup> that evinced the agency’s  
13 move even further away from strictly following standards of identity. This new regulation allows  
14 modified versions of standardized foods to be labeled with both a “nutrient content claim and a  
15 standardized term.”<sup>13</sup> This new regulation, in other words, enabled manufacturers to create  
16 alternative versions of standardized foods that appealed to consumers looking to reduce their  
17 consumption of certain nutrients, such as cholesterol or fat. Thus, the FDA effectively created a  
18 regulatory workaround to enforcing standards of identity that allowed manufacturers to both create  
19 new innovative products and communicate to consumers that such new products have the same  
20 function and form as standardized foods—such as “ice cream”—but are modified to be, for example,  
21 “low fat” ice cream.

22  
23  
24 <sup>9</sup> 48 Fed. Reg. 37,666, 37,667 (Aug. 19, 1983).

25 <sup>10</sup> Public Law 101-535.

26 <sup>11</sup> 58 Fed. Reg. 2,302 (Jan. 6, 1993).

27 <sup>12</sup> 21 C.F.R. § 130.1.

28 <sup>13</sup> Public Law 101-535.

23. Yet another workaround to enforcing standards of identity came in recent years. Congress amended the FDCA in 2004 to require disclosures of common allergens on food labels.<sup>14</sup> This was due to heightened interest and demand for products free of allergens like tree nuts and gluten, which can cause serious injury or death to consumers with heightened sensitivities to certain ingredients.<sup>15</sup> Manufacturers responded to the heightened demand for allergy-free alternatives to traditional standardized foods by creating such products to better fit the health needs of consumers. Such a change in the law is logical; without amendments to the FDCA, innovative food products, like “gluten-free bread” and “gluten-free noodles,” would violate the FDA’s standards of identity.

**C. Naming conventions used by plant-based dairy products do not run afoul of the FDA’s standards of identity for animal dairy products.**

24. The FDA itself recently admitted that it has “a history” of not enforcing standards of identity and has allowed many products to use standardized terms without penalty.<sup>16</sup> In the marketplace today, it is commonplace for products to use compound words as clever descriptions—something consumers have come to expect. For instance, many producers use qualifying words to differentiate their products from traditional foods, such as “turkey bacon,” which is not bacon, “buffalo wings,” which are not made of buffalo, “chicken-fried steak,” which is not chicken, and “non-dairy creamer,” which contains no milk cream. In fact, the FDA itself has promulgated standards of identity for products that contain other standardized terms—“peanut butter,” “rye bread,” and “rice noodles” being among the most commonplace examples. This all shows that the FDA has not taken issue with such qualifying words in front of standardized terms.

---

<sup>14</sup> See Food Allergen Labeling and Consumer Protection Act of 2004, Pub. Law 108-282; 21 U.S.C. §§ 343(w), 321(qq).

<sup>15</sup> See, e.g., J.F. Ludvigsson et al., *Increasing Incidence of Celiac Disease in a North American Population*, 108 AM. J. GASTROENTEROL. 818 (2013), available at <http://www.nature.com/ajg/journal/v108/n5/full/ajg201360a.html>.

<sup>16</sup> *Statement From FDA Commissioner Scott Gottlieb, M.D., on the Process FDA is Undertaking for Reviewing and Modernizing the Agency’s Standards of Identity for Dairy Products*, U.S. FOOD & DRUG ADMIN. (July 26, 2018), <https://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm614851.htm>.

25. In light of this history of nonenforcement and marketplace trends, it is clear that plant-based dairy products comply with current FDA labeling regulations governing statements of identity.<sup>17</sup> Consumers notice, and FDA apparently has too: They realize that calling a product “soymilk” does not mean that it is cow “milk,” and calling something “vegan mozzarella style shreds” does not mean it’s “mozzarella.” Statements of identity, by their very definition, “accurately identify or describe . . . the basic nature of the food or its characterizing properties or ingredients.”<sup>18</sup> FDA has not established any standard of identity for plant-based dairy products, so they must be labeled according to their common or usual name. This common or usual name—or “statement of identity”—is something food companies can coin themselves, so long as it identifies or describes “the basic nature of the food or its characterizing properties or ingredients.”<sup>19</sup> And truthful statements of identity can include the standardized terms accompanied by appropriate descriptors.

26. The market is replete with examples of products whose statements of identity include names that belong to standardized foods.<sup>20</sup> FDA has repeatedly recognized that simply using a term that is part of a Standard of Identity (or, in the case of butter or milk, an entire Standard of Identity) does not violate that Standard and does not cause any consumer confusion. Likewise, use of words like “milk,” “yogurt,” and “cheese”<sup>21</sup> with appropriate descriptors in the common or usual names of plant-based products does not violate any standard of identity.

---

<sup>17</sup> 21 C.F.R. 101.3; 21 C.F.R. 102.5.

<sup>18</sup> 21 C.F.R. 102.5(a).

<sup>19</sup> 21 C.F.R. 102.5(a).

<sup>20</sup> *See, e.g.*, goat milk, sheep milk, and water buffalo’s milk (21 C.F.R. §§ 133.155(b)(1), 133.183(a), and 135.115) despite Standard of Identity for “milk”; Rice noodle products despite Standard of Identity for noodle products (21 C.F.R. 139.150) requiring wheat content; *See also* statements of identity such as coconut water, maple water, nutrient enhanced water beverage, sparkling energy water, protein water, ionized alkaline water, compared with Standard of Identity for bottled water at 21 C.F.R. 165.110.

<sup>21</sup> N.B.: FDA has set Standards of Identity for many types of cheese, but there is no Standard of Identity for the word “cheese” alone. Thus, products labeled as “vegan cheese” cannot come close to any Standard of Identity because no such standard exists.

27. Finally although, “butter” has long been subject to a specific standard of identity,<sup>22</sup> the FDA has repeatedly recognized that other foods—ones that do not meet FDA’s standard for “butter”—can use the term “butter” in their common or usual name. The FDA itself has used the term “butter” in separate and unrelated standard of identities for non-dairy products.<sup>23</sup> Thus, despite the fact that the FDA has set a standard of identity for “butter,” the FDA’s own regulations and enforcement allow products to use the term “butter” for many “smooth, semisolid foods,”<sup>24</sup> as long as they prominently disclose their characterizing ingredient.

**D. Current naming conventions and representations for plant-based products like Miyoko’s do not mislead consumers.**

28. Companies have employed the current naming conventions for plant-based dairy products for decades or more. In that time, not only has the FDA refrained from holding those products in violation of existing standards of identity, but there also has been no indication that consumers have been misled. In fact, evidence to date suggests the opposite: compound names that include qualifying language like “vegan” or “plant-based” combined with “dairy” terms like “milk” or “yogurt” actually *increase* consumer understanding of the nature and contents of these products and *prevent* consumer confusion. See Jareb A. Gleckel, *Are Consumers Really Confused by Plant-Based Food Labels? An Empirical Study*, J. ANIMAL & ENVMTL. L. (forthcoming) (finding that “[o]mitting words that are traditionally associated with animal products from the names of plant-based products actually increases consumer confusion about the taste and uses of these products . . .”).

29. In short, the evidence shows that plant-based dairy alternatives do not deceive the public. What’s more, current naming conventions adhere to the FDA’s naming guidelines for statements of identity because they truthfully convey the products’ form and function to consumers. As ALPC noted in its comments to the FDA, both the U.S. Department of Health and Human

<sup>22</sup> 21 U.S.C. § 321a.

<sup>23</sup> Peanut butter 21 C.F.R. 164.150; Fruit butter 21 C.F.R. 150.110.

<sup>24</sup> 21 C.F.R. 150.110: Standard of Identity for fruit butter.

Services (HHS) and USDA have long recognized that the use of standardized terms for plant-based dairy products as a part of a truthful statement of identity, are commonly understood by consumers. In fact, HHS and USDA repeatedly use terms like “soymilk” and “almond milk” in the current 2015-2020 Dietary Guidelines for Americans.<sup>25</sup>

**i. New evidence shows that consumers are not confused by plant-based butters.**

30. In support of the conclusion that consumers understand plant-based dairy product descriptors, new statistical evidence shows that consumers are not confused by traditional dairy names on plant-based products but actually have a better understanding of the form and function of plant-based dairy alternatives when they use traditional dairy names.

31. A recent empirical study tested if consumers were confused about whether plant-based products with traditional dairy names on their packaging contained any animal products.<sup>26</sup> While there have been similar studies regarding plant-based milks, this is the first empirical study that has tested whether consumers are confused by plant-based butters. When participants were asked whether products labeled “cultured vegan butter” and “cultured vegan spread” contained any animal products, a statistically significant portion of participants thought it was “unlikely” or “very unlikely” that either product contained dairy from a cow.<sup>27</sup>

32. This study also found that participants were more likely to understand the taste and intended use of “cultured vegan butter” than they were to understand the taste and intended use of “cultured vegan spread.”<sup>28</sup> This shows that omitting the word “butter” from the product name actually *caused* consumers to be confused about the plant-based products.

<sup>25</sup> U.S. Dep’t Health & Human Servs. and U.S. Dep’t Agri., Dietary Guidelines 2015–2020, at 23, 49, 82, 109, 113, *available at* [https://health.gov/dietaryguidelines/2015/resources/2015-2020\\_Dietary\\_Guidelines.pdf](https://health.gov/dietaryguidelines/2015/resources/2015-2020_Dietary_Guidelines.pdf)

<sup>26</sup> Jareb A. Gleckel, *Are Consumers Really Confused by Plant-Based Food Labels? An Empirical Study*, J. OF ANIMAL & ENVIRON. L. (forthcoming), *available at* <https://ssrn.com/abstract=3727710>.

<sup>27</sup> *Id.* at 19–20. The study also found that a statistically insignificant percentage of participants thought “cultured vegan butter” did not contain animal products than those who thought “cultured vegan spread” did not contain animal products. *Id.*

<sup>28</sup> *Id.* at 20.

- 1           ii.    **ALPC’s comments to FDA suggested that First Amendment protections would**  
 2           **preclude banning the use of standardized food terms qualified by clear**  
 3           **language or other similarly nonmisleading commercial representations.**

4           33.    As noted in ALPC’s comments to FDA, the government bears a heavy burden to  
 5           justify any ban on truthful commercial speech, or even speech that is potentially misleading. Current  
 6           naming conventions used by plant-based dairy producers are protected under this framework,  
 7           because, as I detailed above, they do not have any potential to mislead consumers.<sup>29</sup> Consumers  
 8           understand that the use of the phrases “milk,” “butter,” and “cheese” on products that are clearly  
 9           disclosed to be “vegan” or “plant-based” do not contain animal-dairy versions of those products.

10          34.    Miyoko’s mission statement, “Revolutionizing Dairy with Plants,” is likewise  
 11          protected as it is at most only potentially misleading. Based on my interactions with industry actors  
 12          and marketing experts via conferences, symposia, and testimony to agencies, I believe that  
 13          consumers are likely to interpret “Revolutionizing Dairy with Plants,” as the company’s potential  
 14          and desire to revolutionize dairy as an industry. Whether this statement merits First Amendment  
 15          protection should be examined using the “reasonable consumer” standard employed by the FDA.<sup>30</sup>  
 16          Under that standard, when Miyoko’s phrase is read as “Revolutionizing [the] Dairy [industry] with  
 17          Plants” instead of “Revolutionizing Dairy[-Based Milk Products] with Plants,” it becomes clear that  
 18          the statement is not inherently misleading, but is—at most—open to two interpretations.

19           **E. Recent state and federal legislative efforts to prevent plant-based products from using**  
 20           **traditional dairy terms are pretextual efforts to appease the dairy industry.**

21  
 22  
 23          <sup>29</sup> As noted by ALPC’s comments to the FDA, preventing plant-based dairy products and other products such  
 24          as breads and noodles from using qualified standardized terms would only increase the potential to mislead  
 25          consumers who are already familiar with, accept, and understand the use of these qualified standardized terms.

26          <sup>30</sup> FDA uses a “reasonable consumer” standard when evaluating whether a consumer is likely to be misled. U.S.  
 27          Food & Drug Admin., GUIDANCE: QUALIFIED HEALTH CLAIMS IN THE LABELING OF  
 28          CONVENTIONAL FOODS AND DIETARY SUPPLEMENTS, 2002 WL 32811482, at \*5 (2002)  
 (superseded on other grounds by U.S. Food & Drug Admin., GUIDANCE: INTERIM PROCEDURES FOR  
 QUALIFIED HEALTH CLAIMS IN THE LABELING OF CONVENTIONAL HUMAN FOOD AND  
 HUMAN DIETARY SUPPLEMENTS, 2003 WL 24014304 (2003) (“In assessing whether food labeling is  
 misleading, FDA will use a ‘reasonable consumer’ standard.”).

1           35. It is no surprise that the U.S. government promotes dairy sales—from funding the  
 2 legendary “Got Milk?” ad campaign<sup>31</sup> to suggesting women on the Supplemental Nutrition  
 3 Assistance Program (SNAP) drink three cups of fluid milk per day<sup>32</sup> to paying fast food restaurants  
 4 to develop foods that use extra cheese<sup>33</sup>—but it is not every day that the government explicitly strives  
 5 to hurt dairy’s competitors. Both at the state and federal levels, new legislative efforts continually  
 6 arise and aim to prohibit manufacturers from using traditional meat and dairy terms on plant-based  
 7 foods, all under the guise of “consumer confusion.” Because government actors have yet to produce  
 8 scientific evidence of such consumer confusion, this legislative trend of regulating plant-based foods  
 9 comes across as a pretextual tactic meant only to appease the dairy industry.

10           36. The legislative battle over the term “milk” is illustrative. “Milk” is a standardized  
 11 food under the FDCA and is defined as “the lacteal secretion, practically free from colostrum,  
 12 obtained by the complete milking of one or more healthy cows.” Plainly, plant-based milks do not  
 13 meet this definition (and neither do goat or sheep milks, for that matter). The “milk” standard of  
 14 identity has been around since 1938, so one can easily surmise that the timing of these new laws  
 15 banning plant-based beverages from using the term “milk” is related to extremely low milk sales<sup>34</sup>  
 16 and remarkably high plant-based milk sales.<sup>35</sup>

17           37. For instance, Wisconsin Senator Tammy Baldwin introduced in Congress the DAIRY  
 18 PRIDE Act (short for “Defending Against Imitations and Replacements of Yogurt, Milk, and Cheese  
 19

20  
 21 <sup>31</sup> Chase Purdy, *The Secretive US Funding Behind the Got Milk? Ads Finally Gets Scrutiny*, QUARTZ (Mar. 29,  
 22 2017), <https://qz.com/944630/the-us-government-program-behind-the-got-milk-campaign-attacked-vegan-mayo-and-is-now-under-congressional-scrutiny/>.

23 <sup>32</sup> H. Claire Brown, *SNAP Benefits Max Out at \$38 a Week for Adult Women. A New Bill Would Change That.*, NEW FOOD ECON. (Mar. 7, 2019), <https://newfoodeconomy.org/snap-food-stamps-thrifty-plan-benefit-increase-bill/>.

24 <sup>33</sup> Baylen J. Linneken, *Dairy Farmers Still Have to Pay to Help Domino’s Market This Pizza*, NEW FOOD ECON. (June 1, 2017), <https://newfoodeconomy.org/dairy-farmers-pay-to-help-dominos/>.

25 <sup>34</sup> Caitlin Petreycik, *When Was the Last Time You Bought Milk?*, FOOD & WINE (Mar. 26, 2019), <https://www.foodandwine.com/news/milk-sales-2019>.

26 <sup>35</sup> *US Non-Dairy Milk Sales Grow 61% Over the Last Five Years*, MINTEL: PRESS OFF. (Jan. 4, 2018), <https://www.mintel.com/press-centre/food-and-drink/us-non-dairy-milk-sales-grow-61-over-the-last-five-years>.



to Promote Regular Intake of Dairy Everyday”),<sup>36</sup> which would have amended the FDCA to force the FDA to prohibit the sale of non-dairy milk products labeled with dairy-associated names. The bill, backed by the National Milk Producers Federation,<sup>37</sup> never made it to the Senate floor, but the FDA took note. Shortly after the DAIRY PRIDE Act was introduced, the FDA initiated an informal rulemaking regarding plant-based beverages and foods using dairy labels, opening a comment period to determine whether consumers were confused about the differences between plant-based products and dairy products.<sup>38</sup> The FDA has yet to make public its findings from the comment period, so it is unclear what regulatory route it may (or may not) take next.

38. At the state level, such legislation abounds. North Carolina was the first state to prohibit the sale of plant-based beverages labeled as “milk.”<sup>39</sup> In 2019, Wisconsin introduced an unsuccessful bill that would have prohibited the sale of plant-based milk, butter, and other plant-based products using dairy labels.<sup>40</sup> In 2019, Louisiana passed a similar law, which calls for the Louisiana Department of Health to enforce the FDA’s milk standard of identity as soon as the FDA itself begins enforcing the milk standard of identity.<sup>41</sup> Proponents of these bills have admitted that these laws are designed to benefit the animal-based dairy industry. North Carolina Senator Brent Jackson stated that “dairy farmers need [this law]” because “they’re in dire straits and have been for a number of years.”<sup>42</sup> Wisconsin Senator Howard Marklein stated that the bill was his “way of

<sup>36</sup> S. 130, 115th Cong. (referred to S. Comm. on Health, Education, Labor, & Pensions, Jan. 12, 2017).

<sup>37</sup> Nellie Bowles, *Got Milk? Or Was That Really a Plant Beverage?*, N.Y. TIMES (Aug. 31, 2018), <https://www.nytimes.com/2018/08/31/business/milk-nut-juice-plant-beverage-label.html>.

<sup>38</sup> Use of the Names of Dairy Foods in the Labeling of Plant-Based Products; Extension of Comment Period, 83 Fed. Reg. 58,775 (Nov. 21, 2018).

<sup>39</sup> S.B. 711, Gen. Assemb., 2017 Sess. (N.C. 2018). The enforcement of the law is stayed until 10 additional states pass similar legislation.

<sup>40</sup> *Senate Bill 466*, WIS. STATE LEGIS., <https://docs.legis.wisconsin.gov/2019/proposals/reg/sen/bill/sb466> (last visited Feb. 11, 2021).

<sup>41</sup> S.B. 39, Gen. Assemb., 2019 Sess. (La. 2019).

<sup>42</sup> Abbie Bennett, *If it Doesn’t Come From a Hoofed Animal, You Can’t Call it Milk*, NEWS & OBSERVER, Jun. 6, 2018, 3:09 PM, <https://www.newsobserver.com/news/politics-government/state-politics/article212589549.html>.



1 supporting [Wisconsin's] agriculture industry at a time when they really need it," as dairy farmers  
 2 "are competing with products labeled as milk but have no connection whatsoever to the dairy  
 3 industry."<sup>43</sup> Louisiana Senator Francis Thompson likewise said that the Louisiana bill was designed  
 4 to protect the state's dairy industry.<sup>44</sup>

5 39. The above legislative efforts are patent attempts to advance the interests of dairy  
 6 producers over plant-based milk producers by trying to force the latter to stop using the "milk" label.  
 7 The legislative history behind these bills is clear about this, and these protectionist motives should  
 8 be considered when government actors regulate plant-based producers without first showing any  
 9 evidence of consumer confusion. Until states show evidence of actual consumer confusion, laws and  
 10 regulations meant to harm plant-based products and to support dairy products must be understood as  
 11 surreptitious attempts to induce consumers to choose certain products over others.

12 40. With this in mind, the California Department of Food and Agriculture's enforcement  
 13 letter to Miyoko's Kitchen regarding its plant-based butter labels should be analyzed with the  
 14 knowledge and understanding that both state and federal governments have acted without scientific  
 15 evidence of consumer confusion but instead have acted with vocal support for the dairy industry.

## 16 **VII. Conclusion**

17 41. Commercial speech warrants protection when it enables consumers to make  
 18 "intelligent and well-informed decisions."<sup>45</sup> As of yet, the California Department of Food and  
 19 Agriculture has yet to show why Miyoko's labels do not warrant such First Amendment protection.  
 20 The fact that the FDA itself has not strictly enforced standards of identity also presents questions  
 21 about why states all over the U.S. have either started enforcing the standards themselves against  
 22 plant-based goods or have created their own legislation to enforce certain standards of identity.

23  
 24 <sup>43</sup> Hope Kirwan, *Dairy Groups Applaud Legislation to Crack Down on Dairy, Meat Alternatives in Wisconsin*,  
 25 WIS. PUB. RADIO, Sept. 17, 2019, 5:35 AM, <https://www.wpr.org/dairy-groups-applaud-legislation-crack-down-dairy-meat-alternatives-wisconsin>.

26 <sup>44</sup> Lauren Heffker, *'Truth in Labeling' of Food Products Proposal Sails Through House Committee*, KALB,  
 27 May 30, 2019, 7:54 PM, <https://www.kalb.com/content/news/Truth-in-labeling-of-food-products-proposal-sails-through-House-committee-510648251.html>.

28 <sup>45</sup> *Va. State Bd. of Pharmacy v. Va. Citizens Consumer Council, Inc.*, 425 U.S. 748, 762 (1976).

Further, the fact that plant-based dairy alternatives' sales are skyrocketing while traditional dairy product sales are floundering only complicates the situation more. Courts should analyze plant-based food producers' First Amendment claims with all these factors in mind.

**Declaration**

I declare under penalty of perjury that the foregoing is true and correct.



---

**DECLARATION – NICOLE NEGOWETTI**

Case No. 3:20-cv-893-RS

# Exhibit 1

**NICOLE E. NEGOWETTI**

286 WEST EMERSON STREET, MELROSE, MA 02176

PHONE: (312)342-2887

EMAIL: NNEGOWETTI@LAW.HARVARD.EDU

**CURRENT POSITIONS**

---

**Clinical Instructor and Lecturer on Law**, August 2017 – present

Harvard Law School Animal Law and Policy Clinic, Cambridge, MA, July 2019 – present

Launch and co-lead new Clinical Program; direct and supervise Clinic policy projects involving food, agricultural, and environmental law, food systems, food technology and innovation, animal agriculture, climate change, and animal welfare; Teach Disruptive Food Technologies: Law, Politics, and Policy and Animal Law and Policy seminar.

Harvard Law School Food Law and Policy Clinic, Center for Health Law & Policy Innovation, Cambridge, MA, August 2017 – July 2019

Work with Clinical staff and students on a broad range of international, federal, state, and local policy projects addressing the health, environmental, and economic impacts of our food system; oversee Clinic projects related to food access, nutrition, and public health; supervise the Harvard Law School Mississippi Delta Project, a student practice organization that provides policy and legal services to clients in Mississippi; and teach a Food Law & Policy seminar.

**Senior Fellow**, September 2019 – present

Institute on Science for Global Policy (ISGP), remote position

Lead strategic planning of ISGP Food Innovation Program, a multi-year project funded by the FDA to identify the opportunities, challenges, and priorities recognized by major scientific, technological, private sector, governmental, and public advocacy stakeholders involved in the development and sale of innovative foods and ingredients; lead strategic planning and policy analysis for a multi-year Agricultural Biotechnology Project funded by U.S. federal departments and agencies, including the U.S. Department of State, to align credible science with regulation, trade, and culture in selected countries in Africa, Asia, and Central and South America.

**Collaborating Mentor**, September 2019 – present

Strategic Training Initiative for the Prevention of Eating Disorders (STRIPED), Harvard T.H. Chan School of Public Health, Boston, MA

Collaborate with public health faculty on transdisciplinary research and policy projects to cultivate novel insights and strategies for prevention of eating disorders and disordered weight control behaviors; train law and public health students to develop policy proposals to translate research into policy action to reach the millions of youth at risks for eating disorders and other related problems with food, weight, and appearance.

**Visiting Instructor**, Spring 2019 – present

Friedman School of Nutrition Science and Policy at Tufts University, Boston, MA

Teach a Food Law & Regulation course that examines a variety of legal tools, including legislation, regulation, and litigation, that affect how food is grown, sold, manufactured, labeled, distributed, transported, and consumed in the United States.

**Co-Principal Investigator**, September 2018 – present

Food Innovation, Ethics, Leadership, Development, and Sustainability at Penn State University

Provide legal and regulatory expertise to four-year Alternative Economic Platforms for Future Food Systems project funded by the USDA Agriculture and Food Research Initiative (AFRI) to assess the socioeconomic, cultural, environmental, and ethical implications of cellular agriculture.

**Founder & CEO**, September 2020 – present

Nicole Negowetti Coaching

Provide leadership coaching and consulting services to changemakers and mission-driven organizations.

## **POLICY EXPERIENCE**

---

**Policy Director**, June 2016 – May 2017

The Good Food Institute, Washington D.C., remote position

Provided policy, legal, and regulatory support to transformative plant-based and cultured food companies; worked with Congress on nutritional, agricultural, public health, and regulatory (FDA and USDA) policy in coordination with other groups focused on increasing plant-based food options; cultivated relationships with other nonprofit organizations, including those focused on environmental, global hunger, public health, and food safety issues, to build alliances and support for mutually shared goals.

## **TEACHING EXPERIENCE**

---

**Associate Professor of Law**, February 2015 – August 2016

**Legal Writing Director**, May 2016 – August 2016

Valparaiso University School of Law, Valparaiso, IN

Courses: Torts, Food Law & Policy, Legal Writing and Reasoning, Pretrial Drafting, Appellate Advocacy, Legal Drafting, Independent Study Supervisor.

**Assistant Professor of Law**, June 2011 – February 2015

Valparaiso University School of Law, Valparaiso, IN

**Adjunct Professor**, January 2010 – May 2011

University of New Hampshire School of Law, Concord, NH

Courses taught: Appellate Advocacy, a two-credit upper-level writing course. Fall 2010

Judicial Opinion Drafting, a two-credit upper-level writing course. Spring 2010 and Spring 2011.

## **LEGAL PRACTICE EXPERIENCE**

---

**Litigation Associate**, September 2010 – May 2011

Sheehan, Phinney, Bass + Green P.A., Manchester, NH

Specialized in business and employment law.

**Law Clerk**, August 2009 – August 2010

New Hampshire Supreme Court, Chambers of the Honorable Carol Ann Conboy, Concord, NH

Conducted research. Assisted Judge in preparing cases for decision and oral argument. Drafted opinions.

**Law Clerk Intern**, Fall 2008

United States Court of Appeals for the First Circuit, Chambers of the Honorable Jeffrey Howard, Concord, NH  
Conducted research. Assisted Judge in preparing cases for decision and oral argument. Drafted opinions.

**Summer Law Clerk**, Summer 2007

New Hampshire Supreme Court, Chambers of the Honorable Gary Hicks, Concord, NH  
Conducted research. Assisted Judge in preparing cases for decision and oral argument. Drafted opinions.

**EDUCATION**

---

Franklin Pierce Law Center (University of New Hampshire School of Law), Concord, NH

Juris Doctor, *magna cum laude*, May 2009

Robert Viles Public Interest Fellowship, awarded to a student committed to a career in public interest law.

Daniel Webster Scholar. Graduate of practice-based bar licensing honors program.

Chief Articles Editor, Pierce Law Review

University of Limerick, Limerick, Ireland, First (Highest) Honors, December 2003

Master of Arts in Peace and Development Studies

Rotary Foundation Ambassadorial Scholarship

Dissertation: *Origins of Ethic Conflict: The Basque Country and Bosnia-Herzegovina*

Keynote speaker at the 2004 Centre for Peacebuilding “Weaving the Web of Peace” Conference, Limavady, Northern Ireland

University of Scranton, Scranton, PA, *summa cum laude*, May 2002

Majors: Political Science, Philosophy; Minors: Spanish, History

Honors Program Member. Senior Thesis entitled, *The Czech Republic’s Accession into NATO and the European Union*

Universidad del Valle de Atemajac (UNIVA), Guadalajara, Mexico, Mexican History and Culture Program

Charles University and the University of Economics, Prague, Czech Republic, Central and Eastern European Studies Program

Professor Timothy H. Scully Award for Excellence in Political Science

2002 University of Scranton Merit Award for Academic Excellence and Athletic Achievement

**SCHOLARSHIP**

---

Article, *Democratizing Ownership and Participation in the 4<sup>th</sup> Industrial Revolution: Challenges and Opportunities in Cellular Agriculture*, J. Ag & Human Values (with Robert Chiles, Garret Broad, Leland Glenna, Siena Baker, Mark Gagnon, and Megan Griffin) (forthcoming 2021).

Article, “Clean” Eating: Public Health Issues and Policy Opportunities (forthcoming with Suman Ambwani, Bryn Austin, and Rachel Rodgers).

Article, *Taking (Animal-Based) Meat and Ethics Off the Table: Food Labeling and the Role of Consumers as Agents of Food Systems Change*, 99 Oregon L. Rev. 101 (2020).

Article, *Planetary Health Approach to the Labeling of Plant-Based Meat*, 75 J. Food and Drug Law (2020).

Article, *Scientific, Sustainability and Regulatory Challenges of Cultured Meat*, 1 *Nature Food* 403 (2020) (with Mark Post, Shulamit Levenberg, David L. Kaplan, Nicholas Genovese, Christopher J. Bryant, Jianan Fu, Karin Verzijden, Panagiota Moutsatsou).

Article, *Reconsidering GRAS: Fixing the Food Additive Regulatory System*, *Critical Reviews in Food Science and Nutrition* (2020) (with Cameron Faustman, Daniel Aaron, and Emily Broad Leib).

White Paper, *Doctoring Our Diets: Policy Tools to Include Nutrition in U.S. Medical Training*, Harvard Law School Food Law and Policy Clinic (2019).

White Paper, *Farm Bill Legal Enterprise: Food Access, Nutrition, and Public Health*, Harvard Law School Food Law and Policy Clinic (2018).

Article, *The SNAP Sugar-Sweetened Beverage Debate: Restricting Purchases to Improve Health Outcomes of Low-Income Americans*, 14 *J. Food L. & Pol'y* 83 (2018).

Article, *Establishing and Enforcing Animal Welfare Labeling Claims: Improving Transparency and Ensuring Accountability*, 14 *J. Animal & Nat. Resource L.* 131 (2018).

Book Chapter, *Perspectives and Predicaments of GMO Salmon*, in *INTERNATIONAL FARM ANIMAL, WILDLIFE & FOOD SAFETY LAW* (eds. Gabriela Steier & Kiran Patel) (2017).

Article, *Exposing the Invisible Costs of Commercial Agriculture: Shaping Policies with True Costs Accounting to Create a Sustainable Food Future*, 51 *Val. L. Rev.* 1 (2016).

Article, *Agricultural "Market Touching": Modernizing Trespass to Chattels in Crop Contamination Cases* (with Adam J. Levitt), 38 *Hawaii L. Rev.* 409 (2016) (recipient of the 2017 American Agricultural Law Association (AALA) Professional Scholarship Award and the 2017 Law360 Distinguished Legal Writing Award).

Article, *Food Labeling Class Action Lawsuits in the United States*, 2015/3 *European J. Consumer Affairs* 490 (2016).

Article, *The Frankenfish Debate: Approval and Labeling of Genetically Engineered Salmon*, ABA Section of Environment, Energy and Resources' Constitutional Law Committee Newsletter (2016) (with Gabriella Steier).

Article, *Opening the Barnyard Door: Transparency and the Resurgence of Ag-Gag & Veggie Label Laws*, 38 *Seattle U. L. Rev.* 1345 (2015).

Article, *Implicit Bias and The Legal Profession's "Diversity Crisis": A Call for Self-Reflection*, 15 *Nev. L. J.* 431 (2015).

Policy Paper, *Food Labeling Litigation: Exposing Gaps in the FDA's Resources and Regulatory Authority*, Brookings Institution (July 2014).

Article, *Defining "Natural" Foods: The Search for a "Natural" Law*, 26 *Regent U. L. Rev.* 329 (2014).

Article, *Judicial Decisionmaking, Empathy, and the Limits of Perception*, 47 *Akron L. Rev.* 693 (2014).

Article, *Navigating the Pitfalls of Implicit Bias: A Cognitive Science Primer for Civil Litigators*, 4 *St. Mary's J. on Legal Malpractice and Ethics* 278 (2014).

Article, *A National "Natural" Standard for Food Labeling*, 65 *Maine L. Rev.* 582 (2013).

Article, *Apologies and Fitness to Practice Law: A Practical Framework for Evaluating Remorse in the Bar Admission Process*, 2012 Prof. Law. 37 (2012) (with Mitchell Simon and Nick Smith).

Article, *Revisiting the Regulation Debate: The Effect of Food Marketing on Childhood Obesity*, 7 Pierce L. Rev. 205 (2009).

## PRESENTATIONS AND SPEAKING ENGAGEMENTS

---

Moderator, *Fireside Chat with Dana Wagner, Impossible Foods Chief Legal Officer*, Harvard Law School (Nov. 18, 2020).

Moderator, *Antibiotics in Agriculture: Preventing the Next Pandemic*, Harvard Law School (Nov. 18, 2020).

Speaker, *Red Meat, Meat Alternatives, and Beyond*, Health, Environment, Policy, and the Media Symposium, Harvard T.H. Chan School of Public Health, Boston, MA (Jan. 27, 2020).

Speaker, *Modernizing Food Labeling: The Narratives of Food Innovation and Deciphering Mixed Messages*, Food and Drug Law Journal Symposium: Going Viral: Safeguarding Public Health in the Modern Era, Food and Drug Law Institute, Washington, D.C. (Nov. 15, 2019).

Panelist, *Legal and Regulatory Issues Surrounding Emerging Meat Alternatives*, Emerging Meat Alternatives Conference, American Institute of Chemical Engineers (Nov. 2, 2019).

Panelist, *Sustainability of Plant-Based Meat Alternatives*, Food Innovation Summit, Tufts Friedman School of Nutrition Science and Policy, Boston, MA (Oct. 22, 2019).

Panelist, *War Over Words: Plant-Based, Cellular, and Novel “Meats” and “Dairy” Products*, Food Advertising, Labeling, and Litigation Conference: For the Food and Dietary Supplement Industries, Food Law and Drug Institute, Washington, D.C. (Sept. 26, 2019).

Moderator and Panelist, *NextGenFood Virtual Conference*, Institute on Science for Global Policy (ISGP) Forum (Sept. 25, 2019).

Moderator and Panelist, *Genetic Engineering: The Good, the Bad, and the Necessary Webinar*, Environmental Law Institute (Sept. 11, 2019).

Panelist, *Food Labeling and New Food Technology Webinar*, Council on Food, Agricultural and Resource Economics (C-FARE) (July 25, 2019).

Panelist, *Federal Oversight of Food Biotechnology*, Food and Drug Law Institute Annual Conference, Washington, D.C. (May 2, 2019).

Speaker, *The Future of Protein: Regulation, Politics, and Public Perception*, Symposium, Tufts Friedman School of Nutrition Science and Policy, Boston, MA (April 18, 2019).



Panelist, *Exploring Alternative Proteins: The Science, Policy, and Business of Plant Proteins and Cell-Based Meats*, The Future of Food and Nutrition Graduate Student Research Conference, Tufts Friedman School of Nutrition Science and Policy, Boston, MA (April 6, 2019).

Presenter, *Rethinking "Food Deserts": From Food Access to Equity*, Universities Fighting World Hunger Summit, University of Southern Maine, Portland, ME (March 16, 2019).

Keynote Speaker, *The Future of Protein*, Environmental Symposium, Concord Academy, Concord, MA (Nov. 29, 2018).

Panelist, *Antibiotic Resistance: What Collaboration and Policy Can Do for Our Future*, Public Interest Research Group and Harvard Animal Law & Policy Program Symposium, Harvard Law School, Cambridge, MA (Nov. 15, 2018).

Keynote Speaker, *Hidden in Plain Sight. The Reality Behind Industrial Agriculture and What You Eat*, Valparaiso University School of Law, Valparaiso, IN (Oct. 26, 2018).

Panelist, *Regulation of Cell-Based Meat and Other Modified Foods*, Food and Drug Law Institute Annual Conference, Washington, D.C. (May 8, 2018).

Panelist, Animal Law Section of the American Association of Law Schools (AALS), *Corporate Transparency, Accountability, and Animal Welfare*, San Diego, CA (January 5, 2018).

Panelist, *National Food Policies: Histories and Comparisons*, Taking Stock: The State of Food Law and Policy in Canada, Ottawa, Canada (November 3, 2017).

Presenter, *The Death of Factory Farming*, Harvard Animal Law & Policy Program, Harvard Law School Bicentennial Summit, Cambridge, MA (October 26, 2017).

Panelist, *Lean, Clean & Sustainable: Creating Animal-Free Meat that is Healthier, More Humane, and Less Harmful to the Planet*, Food Innovation and the Law: Navigating the Next Frontier, Harvard Law School, Cambridge, MA (October 13, 2017).

Panelist, *Voices in Our Heads: Implicit Bias and How It Is Slowing Our Success*, ABA Tort Trial & Insurance Practice Section (TIPS) 2017 Section Conference, Chicago, IL (April 26, 2017).

Keynote Speaker, *New Regulatory Frameworks for Plant-Based and Clean Foods*, Student Animal Legal Defense Fund & Environmental Law Society Luncheon, Columbia University Law School, New York, NY (October 11, 2016).

Keynote Speaker, *New Regulatory Frameworks for Plant-Based and High-Tech Foods: How Will Clean (i.e. "Cultured") Foods be Regulated?*, Chicago Bar Association Food Law Committee Meeting, Chicago, IL (September 19, 2016).

Poster Presenter, *Just Food? Forum on Land Use, Rights and Ecology*, Harvard Law School, Cambridge, MA (March 25-26, 2016).

Panelist, *Food Production Issues: Should Consumers Know More about What They Eat*, American Agricultural Law Association Educational Symposium, Charleston, SC (October 22, 2015).

Panelist, *Key Issues in Environmental Law: Climate Change, Energy, and Agriculture*, Valparaiso University Law School (November 6, 2015).

Panelist, *Re-Tooling Food Law: How Traditional Legal Models Can Be Re-Tooled for Food System Reform*, Seattle University Law Review Symposium, Seattle, WA (March 6, 2015).

Presenter, *Navigating the Pitfalls of Implicit Bias: A Cognitive Science Primer for Civil Litigators*, St. Mary's Law Journal Symposium on Legal Malpractice & Ethics, San Antonio, TX (February 28, 2014).

Presenter, *Food Labeling Issues: Animal Welfare Claims*, Animal Law Conference, DePaul University School of Law Center for Animal Law, Chicago, IL (October 30, 2013).

Presenter, *Identifying the "Naturalness" of Food: A Challenge for our Modern Food System*, Yale Food Systems Symposium, New Haven, CT (October 17-18, 2013).

Presenter, *Defining "Natural" Foods: Options for Uniformity in the Absence of Government Regulation*, Emerging Issues in Food Law Symposium, Regent University, Virginia Beach, VA (September 28, 2013).

Presenter, *Judicial Opinion Writing: A Teacher-Ready Toolkit*, with Ruth C. Vance, Rocky Mountain Regional Legal Writing Conference, Arizona State University, Sandra Day O'Connor College of Law, Tempe, AZ (March 23-24, 2012).

Presenter, *Insights From the Bench and Bar: Ethical Dilemmas Commonly Faced In Practice*, Central States Regional Legal Writing Conference, John Marshall School of Law, Chicago, IL (September 16, 2011).

Presenter, *Beyond the Brief: Preparing Students for the Pitfalls of Practice*, Empire State Regional Legal Writing Conference, St. John's University School of Law, New York, NY (May 13, 2011).

Presenter, *Beyond the Brief: Preparing Students for the Pitfalls of Practice*, Rocky Mountain Regional Legal Writing Conference, University of Nevada Boyd School of Law, Las Vegas, NV (March 25-26, 2011).

## PROFESSIONAL ACTIVITIES

---

Advisor, The Good Food Institute, May 2017 – present.

Board Member, Food & Drug Law Journal Editorial Advisory Board, 2015 – present.

Consultant, Hoosier Environmental Council, 2015 – present.

Conference Planning Committee, Academy of Food Law and Policy, 2017 – present.

Founding Member, Academy of Food Law & Policy, 2016.

Member, Diversity and Inclusion Committee, AALS Section on Legal Writing, Reasoning, and Research, 2015 – August 2016.

Reviewer, *Health Affairs*, 2015 – present.

Reviewer, *American Journal of Law and Medicine* (AJLM), 2015 – present.

Food Legislation and Litigation Advisor, Guidepoint, 2015 – present.

Consulting food industry on current trends in food regulation and litigation.

Member, American Association of Law Schools, sections on Legal Research, Writing, and Reasoning; Agricultural & Food Law; Animal Law; Tort & Compensation Law; Women and Legal Education.

Member, American Agricultural Law Association.

Member, Legal Writing Institute.

Member, New Hampshire Bar Association.

## **LAW SCHOOL SERVICE**

---

Attorney Supervisor, Mississippi Delta Project, Harvard Law School, 2017- 2019.

Co-founder, Institute for Environmental Sustainability, Valparaiso University, 2015.

Faculty Advisor, Valparaiso Food Law Society, 2016.

Chair, Student Accommodations Committee, 2014 – August 2016.

Chair, Diversity & Inclusion Committee, 2015 – August 2016; Member 2014 – 2015.

Curriculum Committee, 2011 – 2013.

Representative, Valparaiso University Judicial Council, 2014 – August 2016.

Faculty Advisor to Students, 2011 – August 2016.

Law Review Faculty Advisor, 2012 – August 2016.

Faculty Advisor, Parents Attending Law School (PALS), 2015 – August 2016.

## **COMMUNITY SERVICE**

---

Co-founder and Vice-Chair, Northwest Indiana (NWI) Food Council, June 2015 – August 2017.

Chair, Policy & Advocacy Working Group

Co-organizer, Northwest Indiana (NWI) Local Food Summit, April 24, 2015.

Member, C-Lab (Civic Incubator Project), Valparaiso, IN, 2015 – 2017.

## Exhibit 2

HARVARD LAW SCHOOL  
ANIMAL LAW & POLICY CLINIC

KATHERINE A. MEYER  
Clinic Director

NICOLE E. NEGOWETTI  
Clinical Instructor



1585 MASSACHUSETTS AVE.  
CAMBRIDGE, MA 02138

[animal.law.harvard.edu](http://animal.law.harvard.edu)

Food and Drug Administration  
5630 Fishers Lane, Rm. 1061  
Rockville, Maryland 20852

**Re: Docket No. FDA-2018-N-2381, “Horizontal Approaches to Food Standards of Identity Modernization”**

**Statement of Interest**

The Harvard Law School Animal Law & Policy Clinic respectfully urges the U.S. Food and Drug Administration (FDA) to adopt the regulatory approach proposed by The Good Food Institute (GFI) in its 2017 Rulemaking Petition to Recognize the Use of Well-Established Common and Usual Compound Nomenclatures for Food.<sup>1</sup> The Animal Law & Policy Clinic (ALPC) undertakes work in the field of animal law and policy, domestically and internationally, and focuses on high impact opportunities to improve the treatment of animals through advocacy, policy, and litigation. As part of this work, ALPC closely monitors technological and regulatory developments within the food sector that have the potential to affect animals. Plant-based and cell-based alternatives to animal food products are innovations with tremendous potential to positively impact animals, improve human health, and ensure environmental sustainability. Accordingly, ALPC proposes a labeling scheme clarifying that non-standardized food names can reference standardized terms. Such clarification from the FDA prioritizes public health, safety, and transparency, and also enables innovative food producers to truthfully label their products.

**Recommended Action**

ALPC recommends that FDA issue a regulation clarifying that foods may be named by reference to standardized foods so long as the nomenclature makes the foods’ origins or properties clear to consumers, as petitioned by GFI. Such nomenclature is commonplace in American food marketing, and consumers easily understand and accept its use for a broad range of products.

ALPC urges FDA to amend 21 C.F.R. § 102.5 by adding the following language, proposed by GFI, after part (d):

- (e) The common or usual name of a food may be —
  - (1) the common or usual name of another food preceded by a qualifying word or phrase that identifies (i) an alternative plant or animal source that replaces the main

---

<sup>1</sup> Bruce Friedrich et al., Petition to Recognize the Use of Well-Established Common and Unusual Compound Nomenclatures for Food, Docket No. FDA-2017-P-1298, Good Food Institute, (March 2, 2017).

characterizing ingredient(s) or component(s) of such other food, or (ii) the absence of a primary characterizing plant or animal source, or of a nutrient, allergen, or other well-known characterizing substance, that is ordinarily present in such other food; or

(2) any other word or phrase comprised of two or more terms, which may be separated by hyphens or spaces; but if such name includes the common or usual name of any other food, it must effectively notify consumers that the product is distinct from such other food.

The use of such a name does not violate section 403 of the Act or regulations of this chapter solely because it includes the common or usual name of another food (including a food for which a standard of identity is established) if the entire name serves to notify a reasonable consumer that the product differs from such other food.”<sup>2</sup> This approach would enable American food innovators to create healthier and more sustainable food products, while also ensuring that that products are labeled truthfully. Should FDA undertake the petitioned rulemaking, ALPC also recommends that FDA publish interim guidance for the industry affirming that such common and usual food names may be used with appropriate qualifying terms, consistent with the proposed regulation.<sup>3</sup>

#### **I. GFI’s proposed rule is consistent with FDA’s and Congress’s increasingly flexible approach towards standards of identity.**

The following federal regulatory and legislative history of standards of identity demonstrates how the proposed regulation is consistent with long-standing FDA and Congressional policy and practice, and how it aligns with the trajectory towards increased regulatory flexibility of the food standards. FDA originally established food standards of identity in 1938 to prevent fraud, promote honesty and fair dealing in the food industry, and enable consumers to make informed purchasing decisions.<sup>4</sup> Most of today’s existing food standards of identity were subsequently established through rulemaking between the 1950s and 1970s.<sup>5</sup>

FDA has repeatedly acknowledged the need for increased flexibility with standardized food terms to keep up with innovation. For example, FDA decided in the 1970s that it would sometimes be “necessary” to include one food name within another “to provide the consumer with accurate, descriptive, and fully informative labeling.”<sup>6</sup> Under this guidance, it would be accurate and fully informative to continue using a term such as “almond milk” because it accurately describes the product as coming from almonds while being functionally similar to conventional dairy milk. The rest of the label includes (as necessitated by law) the ingredients and nutritional information, and is thus fully informative. Later, in 1983, FDA decided that for “substitute” foods (i.e., “foods made in semblance” to the standardized foods, such as “milk”), it is “reasonable and appropriate” to utilize a standardized food name, if “the name of the food [is] modified such that the nature of the

<sup>2</sup> *Id.* at 2.

<sup>3</sup> *Id.*

<sup>4</sup> See, e.g., H. Thomas Austern, *The F-O-R-M-U-L-A-T-I-O-N of Mandatory Food Standards*, 2 FOOD, DRUG, COSM. L.Q. 532, 541-42 (1947); Richard A. Merrill and Earl M. Collier, Jr., *Like Mother Used to Make”: An Analysis of Standards of Identity*, 74 COLUM. L. REV. 561, 576 (1974).

<sup>5</sup> Andrea Kraus, Ph.D., *Standards of Identity History & Current Status*, Center for Food Safety and Applied Nutrition, U.S. Food & Drug Admin., Sept. 27, 2019, available at <https://www.fda.gov/food/workshops-meetings-webinars-food-and-dietary-supplements/public-meeting-horizontal-approaches-food-standards-identity-modernization-09272019-09272019#event-materials>.

<sup>6</sup> 44 Fed. Reg. 3964, 3965 (Jan. 19, 1979), quoting 38 Fed. Reg. 20702, 20703 (Aug. 2, 1973).

substitute food is clearly described and is clearly distinguished from the food which it resembles and for which it is intended to substitute.”<sup>7</sup> These decisions mark the beginning of FDA’s long-standing pattern and practice of permitting the use of qualifying terms in conjunction with standardized food names to describe alternative products that function similarly to standardized foods.

Congress also indicated its intention to better protect consumers while promoting food innovation when it passed the 1990 Nutrition Labeling Education Act (NLEA). The NLEA required nutrition and ingredient information on food packages to ensure that consumers are informed of food ingredients and are not misled into purchasing inferior products.<sup>8</sup> One of the primary goals of the NLEA was explicitly “to encourage product innovation through the development and marketing of nutritionally-improved foods.”<sup>9</sup> Today, nutrition fact panels and ingredient statements continue to provide information that allow consumers to select the foods that best fit their own preferences and needs.

FDA’s trajectory towards increased regulatory flexibility to enable increased innovation accelerated when the agency promulgated regulation 21 C.F.R. § 130.1 under the new NLEA.<sup>10</sup> This regulation permits modified versions of standardized foods to be labeled with a “nutrient content claim and a standardized term.”<sup>11</sup> This regulation allowed food manufacturers to create alternative versions of standardized foods that appealed to consumers seeking to reduce consumption of certain nutrients, such as fat and sodium. The regulation enabled food manufacturers to communicate to consumers that the modified product served the same function and had the same form as the standardized food, such as “ice cream” or “salad dressing,” but was modified to be, for example, “low-fat.”<sup>12</sup> The regulation also permitted deviation from the “non-ingredient provisions” of food standards of identity such as “moisture content, food solids content requirements, or processing conditions.”<sup>13</sup> It also permitted the addition of any “safe and suitable ingredients . . . used to improve texture, add flavor, prevent syneresis, extend shelf life, improve appearance, or add sweetness,” even if the addition of such ingredients to the standardized food would otherwise violate the standard of identity.<sup>14</sup> 21 C.F.R. § 130.1 represents an important step taken by FDA towards flexibility in utilizing standardized food terms to permit consumers to choose alternative versions of familiar products that better meet their nutritional needs, preferences, or values.

FDA continued to adopt a flexible approach towards standards of identity into the 1990s. In 1995, FDA requested public comment on the utility of food standards and how they might be modified, including how they “could be revised to grant the flexibility necessary for timely development and marketing of products that meet consumer needs, while at the same time providing consumer protection.”<sup>15</sup> Of the 95 submitted comments, many requested simplification of the standards, and more flexibility and clarity.<sup>16</sup>

<sup>7</sup> 48 Fed. Reg. 37666, 37667 (Aug. 19, 1983).

<sup>8</sup> Public Law 101-535.

<sup>9</sup> 58 Fed. Reg. 2302 (Jan. 6, 1993).

<sup>10</sup> Public Law 101-535.

<sup>11</sup> *Id.*

<sup>12</sup> *Id.*

<sup>13</sup> 21 C.F.R. § 130.10(b)(A)(c).

<sup>14</sup> 21 C.F.R. § 130.10(d)(1). This regulation excluded foods “specifically prohibited by the standard,” which are not permitted in the modified foods. 21 C.F.R. § 130.10(d)(3).

<sup>15</sup> 70 Fed. Reg. 29217 (May 20, 2005).

<sup>16</sup> Kraus, *supra* note 5.



Since the beginning of the 21st century, the federal government has continued to demonstrate a preference for regulatory flexibility to allow innovation and development of food products that suit individualized health needs and preferences. In 2004, Congress amended the Federal Food, Drug and Cosmetic Act (FFDCA) to require disclosures of allergens on food labels.<sup>17</sup> Meanwhile, greater awareness of diseases related to consumption of certain foods (such as celiac disease), and food sensitivities and intolerances spurred a heightened demand for products that were free of allergens, such as gluten.<sup>18</sup> According to Food Allergy Research & Education (FARE), 32 million Americans have food allergies, 5.6 million of whom are children under age 18, and “childhood hospitalizations for food allergy tripled between the late 1990s and the mid-2000s.”<sup>19</sup> Interest in and demand for gluten-free foods has steadily risen and is expected to continue growing in the coming years.<sup>20</sup> A 2018 study found that 24 percent of Americans now “avoid gluten always or usually.”<sup>21</sup> Producers have responded by developing countless alternatives to traditional standardized foods to enable all consumers to have palatable options that suited their health needs, such as bread and noodles made without wheat.

FDA and the Food Safety Inspection Service (FSIS) within the U.S. Department of Agriculture (USDA) both recognized the continuing need to adopt a flexible approach to their standard of identity regulations to keep pace with accelerating food innovation driven by intensifying consumer demand. In 2005, the two agencies jointly solicited public comments on their proposed rule to modernize food standards through a set of general principles that would guide the creation, revision, or elimination of food standards.<sup>22</sup> The proposed rule included 13 principles, which included recognizing the need for flexibility so as not to “stifle innovations in food technology.”<sup>23</sup>

Fourteen years later, the ongoing discussion regarding the need for such modernization, and the length of time it has taken to make needed changes thus far, highlights the complexity of modernizing standards of identity in a way that prioritizes consumer health and safety, innovation, and consumer choice. The federal government now continues to emphasize the need for increased flexibility in food regulation. In June of 2019, the Administration affirmed these priorities in its 2019 Executive Order on Modernizing the Regulatory Framework for Agricultural Biotechnology Products when it articulated its ongoing intention to prioritize “timely, efficient” food regulation that avoids “undue regulatory burden” while protecting consumer health and safety.<sup>24</sup> Several months later, in the recent notice of its Public Meeting on Horizontal Approaches to Food Standards of Identity Modernization, FDA stated that one of its key goals is to “promote industry

---

<sup>17</sup> See Food Allergen Labeling and Consumer Protection Act of 2004, Pub. Law 108-282; 21 U.S.C. §§ 343(w), 321(qq).

<sup>18</sup> See, e.g., J.F. Ludvigsson et al., *Increasing Incidence of Celiac Disease in a North American Population*, 108 AM. J. GASTROENTEROL. 818 (2013), available at <http://www.nature.com/ajg/journal/v108/n5/full/ajg201360a.html>.

<sup>19</sup> Food Allergy Research & Education, *Food Allergy Facts and Statistics for the U.S.*, available at <https://www.foodallergy.org/life-with-food-allergies/food-allergy-101/facts-and-statistics>

<sup>20</sup> Jeff Gelski, *Gluten-free: Evolving, Improving and Still Growing*, Foods Business News (Aug. 8, 2019), available at <https://www.foodbusinessnews.net/articles/14384-gluten-free-evolving-improving-and-still-growing>.

<sup>21</sup> *Id.*

<sup>22</sup> 70 Fed. Reg. 29214 (May 20, 2005).

<sup>23</sup> 70 Fed. Reg. 29221 (May 20, 2005).

<sup>24</sup> E.O. 13874, Executive Order on Modernizing the Regulatory Framework for Agricultural Biotechnology Products, Land & Agriculture (June 11, 2019).



innovation and provide flexibility to encourage manufacturers to produce healthier foods.”<sup>25</sup> While considering ways to modernize food standards of identity, FDA should prioritize this goal, which is entirely consistent with the rule proposed in this comment.

Not only does the proposed rule align with the trajectory of increased flexibility to promote healthful food innovation, it also would codify FDA’s long-standing practice of tacitly permitting the use of qualifying terms such as “soy” or “rye” in conjunction with standardized terms such as “milk” and “bread” to accurately describe foods in a manner that reasonable consumers understand. This suggested approach would not require or provoke a change to existing standards of identity when common or usual food names are used in conjunction with qualifying terms. The approach also does not preclude otherwise modifying existing standards or creating new standards when deemed necessary for other reasons such as modernization of ingredients or production methods, or to prevent fraud. Accordingly, adoption of the proposed regulation satisfies the goal of modernizing food standards across product categories, while also obviating the risk of significant disruption in regulated industries that a systemic shift in standards of identity could provoke. Codification of existing FDA policy and practice would provide much-needed regulatory certainty for food innovators and their consumers.

## **II. Maintaining the current system without providing regulatory certainty would hinder FDA’s goal of promoting innovation.**

Currently, food innovators could be withholding the introduction of new products to the market because they are uncertain as to FDA’s policy regarding the use of common or usual standardized food names when paired with qualifying terms. Food producers seek to use the terms that most effectively indicate to consumers what a product contains and how a product is intended to be used. In the case of foods such as plant-based milks and noodles made without wheat, the use of qualifying terms in conjunction with standardized names such as “bread,” “milk,” and “noodle” is often the clearest way to communicate how a consumer should use a product. The qualifying term indicates what the product contains while the standardized term indicates what the product can be used for. For instance, customers looking for alternatives to cows’ milk to pour on their cereal would likely understand that almond milk can be used on cereal than they might be with a product called “almond beverage” or “almond juice.” The term “almond” indicates that the product is made from almonds. Should the consumer seek further information, the product packaging already includes the ingredient statement and nutrition facts, pursuant to the NLEA.

Under the current climate of uncertainty regarding use of standardized terms, food companies may be hesitant to include on their labeling common nomenclature that includes a standardized term, even though it informs consumers of a food product’s form and function. Although companies can voluntarily consult with FDA regulators to discuss food labels prior to marketing a product, case-by-case discussions are ineffective and insufficient to address widespread uncertainty among food innovators. The current lack of regulatory clarity may thus be chilling innovation. Undertaking the petitioned-for rulemaking and publishing interim industry guidance would provide much-needed clarity to industry and substantially eliminate the possibility of such a chilling effect.

---

<sup>25</sup> FDA Announces Public Meeting to Discuss Modernizing Food Standards of Identity, (Aug. 28, 2019), *available at* <https://www.fda.gov/food/cfsan-constituent-updates/fda-announces-public-meeting-discuss-modernizing-food-standards-identity>.

### III. Banning the use of standardized food terms qualified by clear and accurate language would likely violate the First Amendment.

Preventing the use of common and usual standardized names paired with qualifying terms, such as “almond milk,” “rye bread,” or “rice noodles,” would likely run afoul of the First Amendment. Under one of the leading cases on the issue, the Supreme Court held in *Sorrell v. IMS Health Inc.* that commercial speech is protected under the First Amendment as long as it is not inherently misleading.<sup>26</sup> Package labels are a form of commercial speech because they propose a commercial transaction.<sup>27</sup> Thus, product names on labels will be protected as commercial speech under the First Amendment unless they are inherently misleading. For restrictions of speech on product labels that are *potentially* misleading, but are not *inherently* misleading, courts apply the test set out in *Central Hudson Gas & Elec. Corp. v. Public Service Commission of New York*.<sup>28</sup> Under that test, to restrict truthful commercial speech, the government must assert a substantial interest, the government must not be mistaken in asserting that substantial interest, the limiting regulation must directly advance that substantial interest, and the limiting regulation must not be more extensive than necessary to meet the interest’s goal; otherwise the speech restriction is unconstitutional.<sup>29</sup> If FDA were to ban the use of standardized names paired with qualifying language on non-standardized foods, courts would likely hold the ban to be unconstitutional because such labeling clearly communicates a product’s form and function, and is thus not inherently misleading; there is no substantial interest in restricting this type of speech given that consumers choose these alternative products for their own individual health, taste and convenience preferences; and even if there were a substantial government interest in creating further distinction between standardized and non-standardized food names, there are less restrictive means available to serve that interest.<sup>30</sup>

#### A. The use of qualified terms paired with common and usual food names is lawful and not inherently misleading to consumers.

Commercial speech only falls outside protection of the First Amendment if it is *inherently* misleading, not if it is simply *potentially* misleading.<sup>31</sup> If it is only potentially misleading, the rest of *Central Hudson* test is applied in full, and the government carries the burden of demonstrating that it has a substantial interest in restricting the speech (for instance, to prevent deception) and that the restriction is narrowly tailored to directly serve that interest.<sup>32</sup> The “inherently misleading” standard is a very high bar for the government to meet.<sup>33</sup> Product names that use qualifying terms to differentiate their content from standardized foods, such as rye bread, rice noodles, soymilk and almond milk, all of which use common and usual but standardized terms such as “noodles,” “milk,” and “bread,” would not meet this very high bar.

<sup>26</sup> 564 U.S. 552, 557 (2011).

<sup>27</sup> *Sorrell v. IMS Health Inc.*, 564 U.S. 552, 557 (2011) (defining commercial speech); *Zauderer v. Off. of Disc. Counsel of S. Ct. of Ohio*, 471 U.S. 626, 637 (1985) (quoting *Ohralik v. Ohio State Bar Assn.*, 436 U.S. 447, 455–56 (1978)) (“Our commercial speech doctrine rests heavily on ‘the “common-sense” distinction between speech proposing a commercial transaction ... and other varieties of speech’”).

<sup>28</sup> 447 U.S. 557, 564 (1980).

<sup>29</sup> See, e.g., *id.* at 564 (1980); *Pearson v. Shalala*, 164 F.3d 650, 655 (D.C. Cir. 1999) (citing, *inter alia*, *In re R.M.J.*, 455 U.S. 191, 203 (1982)).

<sup>30</sup> *Central Hudson*, 447 U.S. at 564.

<sup>31</sup> See *Pearson v. Shalala*, 164 F.3d 650, 655 (D.C. Cir. 1999) (citing, *inter alia*, *In re R.M.J.*, 455 S. 191, 203 (1982)).

<sup>32</sup> *Id.* at 655–56.

<sup>33</sup> See *id.* at 655 (describing “inherently misleading” standard in terms of “awesome impact” leaving consumers “bound to be misled.”)

FDA uses a “reasonable consumer” standard when evaluating whether a consumer is likely to be misled.<sup>34</sup> Many studies show that reasonable consumers are not confused by product labels that use qualified terms in conjunction with a standardized term. For example, a study funded by the dairy industry found that more than 90 percent of consumers surveyed understood that plant-based milks such as soy, coconut, and almond milk do not contain cows’ milk.<sup>35</sup> Studies such as this show that the reasonable consumer is not confused about the contents of plant-based milk. Dairy industry-funded studies have found that approximately 38 percent of consumers now purchase both plant-based and dairy-based milk.<sup>36</sup> These reasonable consumers are not continuing to purchase both products because they mistakenly believe the two products to be identical. Rather, they are purposefully buying both types of milk to suit their own needs and preferences, with a full understanding that the products are distinct from one another.

Indeed, courts have already adjudicated the question of consumer confusion around terms such as “almond milk” and “soymilk” and have concluded that reasonable consumers would not be misled by such product names.<sup>37</sup> For instance, the 9th Circuit Court of Appeals found that by using the qualifying term “almond” in front of “milk,” almond milk manufacturers were clearly communicating that almond milk is indeed distinct from cows’ milk, and that reasonable consumers would therefore also expect the nutritional profile of almond milk to be distinct.<sup>38</sup> In another case involving plant-based milks, a court noted that if a consumer were to be confused by this kind of nomenclature for dairy alternatives, that the “consumer might also believe that veggie bacon contains pork, that flourless chocolate cake contains flour, or that e-books are made out of paper.”<sup>39</sup> Qualified terms can be highly effective in conveying the nature of a product so that consumers can understand what it is and how it is to be used, especially as applied under the current labeling regime, which requires ingredient statements and nutrition facts, and prohibits false or misleading labeling.

Enforcing rigid standards of identity for dairy products or other products such as breads and noodles would only increase confusion among consumers who are already familiar with, accept, and understand the use of qualified standardized terms. Indeed, the U.S. Department of Health and Human Services (HHS) and USDA recognize that qualified standardized terms for

---

<sup>34</sup> U.S. Food & Drug Admin., GUIDANCE: QUALIFIED HEALTH CLAIMS IN THE LABELING OF CONVENTIONAL FOODS AND DIETARY SUPPLEMENTS, 2002 WL 32811482, at \*5 (2002) (superseded on other grounds by U.S. Food & Drug Admin., GUIDANCE: INTERIM PROCEDURES FOR QUALIFIED HEALTH CLAIMS IN THE LABELING OF CONVENTIONAL HUMAN FOOD AND HUMAN DIETARY SUPPLEMENTS, 2003 WL 24014304 (2003) (“In assessing whether food labeling is misleading, FDA will use a ‘reasonable consumer’ standard.”).

<sup>35</sup> Beth Newhart, *75% of US adults aren’t confused by dairy alternative labels, new study finds*, Dairy Reporter, Oct. 12, 2018 (survey of 1,000 individuals), available at <https://www.dairyreporter.com/Article/2018/10/12/75-of-US-adults-aren-t-confused-by-dairy-alternative-labels-new-study-finds>.

<sup>36</sup> *Id.* (finding that 38 percent of consumers purchase both); Dairy Management Inc. (DMI) published a similar study, (Oct. 2018) (survey of 3,823 individuals finding that nearly *available at* <https://www.usdairy.com/~media/usd/public/dairy-and-plant-based-beverages-research.pdf>.

<sup>37</sup> See, e.g., *Painter v. Blue Diamond Growers*, No. 17-55901, 2018 WL 6720560 (9th Cir. Dec. 20, 2018) (mem.); *Ang v. WhiteWave Foods Co.*, 2013 WL 6492353 (N.D. Cal., Dec. 10, 2013) (order granting motion to dismiss) (“The first words in these products’ names should be obvious to even the least discerning of consumers. . . . [Claiming that] a reasonable consumer might confuse plant-based beverages such as soymilk or almond milk for dairy milk . . . stretches the bounds of credulity. Under Plaintiff’s logic, a reasonable consumer might also believe that veggie bacon contains pork, that flourless chocolate cake contains flour, or that e-books are made out of paper.”); *Gitson v. Trader Joe’s Co.*, 13-cv-01333, Doc. 139 (N.D. Cal., Dec. 1, 2015) (order granting in part and denying in part partial motion to dismiss; granting in part and denying in part motion to strike).

<sup>38</sup> *Painter v. Blue Diamond Growers*, No. 17-55901, 2018 WL 6720560 (9th Cir. Dec. 20, 2018) (mem.).

<sup>39</sup> *Ang v. WhiteWave Foods Co.*, 2013 WL 6492353 (N.D. Cal., Dec. 10, 2013) (order granting motion to dismiss).

plant-based dairy alternatives are commonly understood because the two agencies repeatedly use the terms “soymilk” and “almond milk” in the current 2015–2020 Dietary Guidelines for Americans.<sup>40</sup> In the Guidelines, HHS and USDA also refer to “soy beverages (soymilk),”<sup>41</sup> and refer to “products sold as ‘milks’ but made from plants (e.g., almond, rice, coconut, and hemp ‘milks’).”<sup>42</sup>

The rule petitioned for by GFI would continue to allow common and usual food names to be used, together with qualifying terms, on non-standardized foods precisely because consumers understand them and rely on them to easily identify foods that they are choosing for health, sustainability, taste, or other reasons. Should consumers seek more detailed information about any particular food, they can find such information in the ingredient statements and nutrition facts panels required by NLEA. Because use of a common or usual name with a qualifying term is not inherently misleading commercial speech, it is commercial speech protected under the First Amendment.

**B. Banning the use of common and usual names of food that involve a standardized term combined with a qualifying term on non-standardized foods would not advance a substantial governmental interest.**

Because consumers are not confused by the use of such names when appropriately qualified, restricting their usage would not directly advance a substantial government interest. In contrast, restricting these terms might negatively affect public health and would restrict consumer choice by creating more confusion around products that may be healthier for humans or the planet. As the Consumer Federation of America (CFA) highlighted in its response to FDA’s call for comments on the “Use of the Names of Dairy Foods in the Labeling of Plant-Based Products,” if FDA restricts the use of the term “milk” to dairy products despite qualifying descriptors to differentiate plant-based products, doing so would “entail arbitrary line drawing and likely lead some consumers to make poorer choices.”<sup>43</sup> CFA highlighted the example of sugary chocolate milk qualifying for the term “milk,” while unflavored, unsweetened, almond milk would no longer qualify despite being a preferred choice for many Americans.<sup>44</sup>

Meanwhile, many individuals are now selecting among a wide variety of alternative food products, which allow consumers to choose options that meet their own health needs and preferences, such as reduced calories in almond milk, or fortification of soy milk, while avoiding allergens, such as gluten, soy, nuts, or lactose. For example, for the millions of Americans who must avoid wheat gluten for health reasons, rice noodles are likely a healthier and convenient alternative. For the 30 to 50 million Americans who are lactose intolerant—with rates of intolerance that are far higher for populations of color such as Asians (95 percent), African Americans (60-80 percent), Hispanics (50-80 percent), and American Indians (100 percent)—

<sup>40</sup> U.S. Dep’t Health & Human Serv. and U.S. Dep’t Agric., Dietary Guidelines 2015–2020, at 23, 49, 82, 109, 113, available at [https://health.gov/dietaryguidelines/2015/resources/2015-2020\\_Dietary\\_Guidelines.pdf](https://health.gov/dietaryguidelines/2015/resources/2015-2020_Dietary_Guidelines.pdf).

<sup>41</sup> *Id.* at 23, 49, 60, 86.

<sup>42</sup> *Id.* at 23.

<sup>43</sup> Thomas Gremillion, *Letter to Scott Gottlieb Re: Use of the Names of Dairy Foods in the Labeling of Plant-Based Products*, Consumer Federation of America, (Jan. 28, 2019), available at <https://consumerfed.org/wp-content/uploads/2019/01/dairy-standards-of-identity-comments.pdf>.

<sup>44</sup> *Id.*

plant-based milks may be a healthier choice.<sup>45</sup> Making alternative products harder to find, understand, and consume by restricting commonly known labeling terms such as “soy milk,” and instead requiring terms such as “soy beverage,” would not only be unduly restrictive, but it could also be discriminatory to Americans of color who rely on these products more than white Americans for health reasons.

Modernizing standards of identity should promote healthful innovation, not unduly burden food producers with labeling restrictions that would make it difficult to convey the nature of food products to consumers. Likewise, regulations should not create confusion by restricting familiar and truthful labeling terms about a product’s contents and function. There are many compelling reasons for FDA to adopt the proposed regulation, including conserving agency resources, facilitating innovation, increasing consumer choice, and enabling healthier and more sustainable consumption. As a result, the government arguably has an interest in *not* restricting the use of common and usual names when qualified terms for non-standardized food products.

**C. Even if FDA could show that restricting the use of standardized food names directly advanced a substantial interest, there are less restrictive means of advancing that interest and would thus not be constitutional.**

Under *Central Hudson*, if the government seeks to restrict truthful and not inherently misleading commercial speech, it must use the least restrictive means necessary to achieve the substantial interest it advances.<sup>46</sup> A labeling restriction that bans use of certain terms on non-standardized foods would not be upheld because there is a less restrictive way to differentiate non-standardized foods from the standardized foods that their labels refer to.<sup>47</sup> Requiring additional disclosures or appropriate qualifying language, just as the proposed regulation suggests, is such an example of less restrictive means. Many plant-based milk companies already disclose that their products are not a suitable substitute for baby formula (just as cows’ milk is not suitable for this purpose). If FDA finds that voluntary disclosures are insufficient to inform parents and that the health of infants are at risk, the agency could mandate such disclosures. Any such disclosures would have to be reasonably related to the agency’s interest in protecting consumer health, and would have to be no more restrictive than necessary to serve this interest to be constitutional.<sup>48</sup>

FDA already mandates multiple sources of consumer information on packaging, including ingredients, nutrition facts, and warnings that certain products are not suitable for children under a certain age.<sup>49</sup> Courts have recognized that such labeling requirements are sufficient to highlight nutritional differences between dairy and dairy alternatives.<sup>50</sup> As a result, restriction of familiar food names would likely be unconstitutional. Indeed, with an ever-increasing availability of food

<sup>45</sup> U.S. Dep’t Health & Human Serv., *Lactose Intolerance: Information for Health Care Providers*, January 2006, available at

[https://www.nichd.nih.gov/sites/default/files/publications/pubs/documents/NICHD\\_MM\\_Lactose\\_FS\\_rev.pdf](https://www.nichd.nih.gov/sites/default/files/publications/pubs/documents/NICHD_MM_Lactose_FS_rev.pdf).

<sup>46</sup> *Central Hudson Gas & Elec. Corp. v. Public Service Commission of New York*, 447 U.S. 557, 564 (1980).

<sup>47</sup> See *Zauderer v. Off. of Disc. Counsel of S. Ct. of Ohio*, 471 U.S. 626, 651 (1985) (stating that “disclosure requirements trench much more narrowly on an advertiser’s interests than do flat prohibitions on speech”).

<sup>48</sup> *Zauderer v. Off. of Disc. Counsel of S. Ct. of Ohio*, 471 U.S. 626, 651 (1985).

<sup>49</sup> A Food Labeling Guide: Guidance for Industry, FDA Center for Food Safety and Applied Nutrition, (Jan. 2013), available at <https://www.fda.gov/files/food/published/Food-Labeling-Guide-%28PDF%29.pdf>.

<sup>50</sup> See, e.g., *Gitson* at 3 (“[A] reasonable consumer (indeed, even an unsophisticated consumer) would not assume that two distinct products have the same nutritional content; if the consumer cared about the nutritional content, she would consult the label.”).



options in the marketplace, consumers will benefit from food companies having *more* speech—not less—in order to navigate food choices through easily recognizable descriptive language.

**D. Restricting the use of language for specific foods or food categories will likely be subject to heightened judicial scrutiny.**

Restrictions on speech that target specific foods or food categories would be content-based and would likely face a higher level of judicial scrutiny.<sup>51</sup> For example, a ban that applied to the use of standardized terms such as “milk” on plant-based milk, but did not apply to other categories of standardized foods would be content-based because it could not be justified without reference to the content of the speech, which in that case would be the dairy-specific speech. Courts consider this type of restriction to be “presumptively invalid,” and thus apply heightened scrutiny when evaluating First Amendment claims.<sup>52</sup> Permitting the use of standardized food terms with qualifying language across product categories, as the proposed rule suggests, would allow FDA to avoid any such First Amendment pitfalls.

**Conclusion**

The Harvard Law School Animal Law & Policy Clinic thanks FDA for this opportunity to provide comment related to horizontal approaches to food standards of identity modernization. As outlined above, ALPC supports the amendment to 21 C.F.R. § 102.5 proposed in the petition for rulemaking submitted to FDA in 2017 by GFI, which would permit the use of common and usual names of foods on non-standardized foods when paired with appropriate qualifying terms. ALPC also supports GFI’s recommendation that FDA publish an interim guidance document affirming that standardized names may be used with qualifying language. Adoption of this rule would facilitate continued food innovation and obviate the need for resource-intensive and time-consuming vertical changes to food standards of identity. Further, the rule would enable FDA to “protect consumers against economic adulteration,” “maintain the basic nature, essential characteristics and nutritional integrity of food,” and “promote industry innovation and provide flexibility to encourage manufacturers to produce healthier foods”<sup>53</sup> while respecting the commercial speech protections guaranteed by the First Amendment.

---

<sup>51</sup> *Sorrell v. IMS Health*, 31 S. Ct. 2653, 2664–65 (2011).

<sup>52</sup> *Id.* at 2667 (quoting *R.A.V. v. St. Paul*, 505 U.S. 377, 382 (1992)).

<sup>53</sup> FDA Announces Public Meeting, FDA (Aug. 28, 2019), *available at* <https://www.fda.gov/food/cfsan-constituent-updates/fda-announces-public-meeting-discuss-modernizing-food-standards-identity>

## Exhibit 3

## Are Consumers Really Confused by Plant-Based Food Labels? An Empirical Study

By Jareb A. Gleckel<sup>†</sup>

*An increasing amount of legislation and litigation, including four current federal cases, addresses how states can and should regulate plant-based food labeling. Plant-based foods contain no animal ingredients but replicate the taste, texture, and function of animal products such as beef, chicken, milk, and butter. Companies typically use the terms “plant-based” or “vegan” on their labels alongside terms like “beef” or “milk” (e.g., “plant-based beef” or “almond milk”) to describe their products to consumers.*

*Eleven states, thus far, have passed legislation and initiated enforcement actions against plant-based food companies to prohibit this labeling practice. Congress and the FDA are also considering such regulations at the federal level. The states claim that, when companies use terms that people traditionally associate with animal products—terms like “beef” and “milk”—on plant-based food labels, consumers become confused about whether they are buying animal products.*

*In response to legislation and enforcement actions, the companies seeking to bring plant-based foods to the market insist that the “consumer confusion” argument is pretextual, and that agricultural lobbies simply want to suppress the message that consumers can enjoy the experience of eating “meat” or “dairy” without killing animals. They argue that using words like “beef” and “milk” on plant-based foods does not confuse consumers about the ingredients; rather, these words are necessary to accurately convey the taste and uses of new products. Plant-based food companies have therefore challenged state laws, claiming that the laws violate their First Amendment right to free speech.*

*This is the first study to address the two empirical questions at the heart of the ongoing, constitutional litigation between companies marketing plant-based foods and the states restricting their labeling practices. First, when companies use words like “beef” and “milk” on products made without animal ingredients, are consumers confused about whether these products come from animals? Second, if companies do not use these words, are consumers more likely to be confused about the taste and function of the plant-based products?*

*The study surveyed 155 participants. After answering a series of distractor questions, participants answered questions about various plant-based meat and dairy products, including whether they believed these foods were made from animals/animal products, how well they could imagine what the products taste like, and whether they believed the products could be used for various purposes. The study employed a between-subjects design. One group of participants answered questions about products whose names included terms like “beef,” “butter,” or “bologna”—terms traditionally associated with animal products. The control group answered questions about products that omitted these terms and replaced them with terms such as “veggie” or “spread.”*

*The results demonstrate that: (1) consumers are no more likely to think that plant-based products come from an animal if the product’s name incorporates words traditionally associated with animal products than if it does not. (2) Omitting words that are traditionally associated with animal products from the names of plant-based products actually causes consumers to be significantly more confused about the taste and uses of these products. Together, the findings imply that legislation prohibiting companies from using words like “beef” and “butter” on their labels does not advance the government’s interest in preventing consumer confusion.*

---

<sup>†</sup> I am grateful to Amy P. Demorest, Chair of Psychology at Amherst College, for her guidance in conducting this research; Sherry F. Colb, C.S. Wong Professor of Law at Cornell Law school, for her editorial feedback; and James Mulhern, Grace Brososky, Kathryn Adamson and Milica Djuric for their advice and support.



## Table of Contents

<i>I. Background:</i>	3
A. Legislation Addressing Plant-Based Foods	3
C. Prior Studies	7
i. Plant-Based Dairy Literature	7
ii. Plant-Based Meat Literature	9
<i>II. Methodology</i>	11
A. Participants	11
B. Survey Overview	12
C. Between-Subjects Design: Experimental and Control Conditions	13
i. Plant-Based Beef Burger vs. Plant-Based Vegetable Patty	15
ii. Cultured Vegan Butter vs. Cultured Vegan Spread	16
iii. Plant-Based Deli Slices: Bologna Style vs. Sandwich Slices	17
D. Statistics	18
<i>III. Results</i>	18
A. Plant-Based Beef Burger vs. Plant-Based Vegetable Patty	18
B. Cultured Vegan Butter vs. Cultured Vegan Spread	19
C. Plant-Based Deli Slices: Bologna Style vs. Sandwich Slices	21
D. Raised and Rooted: Plant-Based Nuggets	21
<i>IV. Conclusion</i>	22
A. Consumers Are No More Likely to Think That Plant-Based Products Come from an Animal if the Product's Name Incorporates Terms Traditionally Associated with Animal Products.	22
B. Omitting Terms that are Traditionally Associated with Animal Products from the Names of Plant-Based Products Confuses Consumers about their Taste and Uses, but it Does Not Impact their Perception of the Products' Nutrition.	23
C. Consumers Expect that "Plant-Based" Products Will Not Contain Any Animal Products, so Including Eggs in Products Labeled "Plant-Based" is Misleading.	24
D. Strengths and Limitations	24
E. Legal Implications	27

I. Background:

A. Legislation Addressing Plant-Based Foods

In 2019, retail sales of plant-based foods reached \$5 billion in the United States.<sup>1</sup> These foods contain no animal ingredients but replicate the taste, texture, and function of animal products such as beef, chicken, milk, and butter. As new plant-based products infiltrate the market, the major legal question has become how the government can and should regulate their labeling and marketing.

In response to these developments, animal-agriculture lobbies have initiated the widespread passage of legislation, at both the federal and state levels, prohibiting plant-based meat and dairy companies from using words like “meat,” “milk,” “butter,” or “beef” on product labels.<sup>2</sup> Supporters of such legislation argue that people have traditionally associated terms like “beef” and “milk” with animal products and that these words, when appearing on plant-based products, therefore mislead consumers about the products’ ingredients. Opponents of the legislation, companies seeking to bring plant-based foods to the market, argue that the “consumer confusion” argument is pretextual.<sup>3</sup> Plant-based food companies contend that the animal-agriculture lobbies simply want to suppress the message that consumers can enjoy the experience of eating “meat” or “dairy” without killing animals; suppressing this message in turn

---

<sup>1</sup> Russel Redman, *Plant-Based Food Retail Sales Reach \$5 Billion*, SUPERMARKET NEWS (Mar. 3, 2020) <https://www.supermarketnews.com/consumer-trends/plant-based-food-retail-sales-reach-5-billion>.

<sup>2</sup> The alternative, regulatory suggestion was for plant-based products to use words like “meat” and “milk” preceded by the term “imitation.” However, this regulatory strategy was largely abandoned following the Ninth Circuit’s decision in *Painter v. Blue Diamond Growers*, No. 17-55901, 2018 WL 6720560 at \*2 (9th Cir. Dec. 20, 2018). In *Painter*, the court explained that “imitation” is a term of art. It identifies products that imitate an established product in every respect, but “substitute” inferior ingredients, creating cheaper, “nutritionally inferior” alternatives. Substituting sugar for fruit in jam therefore creates “imitation jam.” See 62 Cases, *More or Less, Each Containing Jars of Jam v. U.S.*, 340 U.S. 593 (1951) (“[T]he name ‘imitation jam’ at once connotes precisely what the product is: a different, an inferior preserve, not meeting the defined specifications.”). Plant-based milk and meat are not imitation milk or meat because they do not take an animal product and substitute an inferior ingredient to save cost; they are distinct products.

<sup>3</sup> See, e.g., *Tofurky Mounts Free Speech Challenge Against Arkansas Meat Label Law*, ACLU.ORG (July 22, 2019), [aclu.org/press-releases/tofurky-mounts-free-speech-challenge-against-arkansas-meat-label-law](https://www.aclu.org/press-releases/tofurky-mounts-free-speech-challenge-against-arkansas-meat-label-law).

subdues a potential replacement for animal products by keeping consumers unaware of plant-based alternatives. Companies marketing plant-based foods insist, moreover, that using terms like “beef” and “milk” on their products’ labels does not confuse consumers about the ingredients. They maintain, on the contrary, that these terms are necessary to prevent confusion by accurately conveying the taste and uses of their products.

The agricultural lobbies launched their first legislative initiatives at the federal level. In January 2017, Senator Tammy Baldwin proposed the Dairy Pride Act, which would “require enforcement against misbranded milk alternatives.”<sup>4</sup> In February of 2018, the U.S. Cattlemen’s Association petitioned the United States Department of Agriculture (USDA) to “exclude products not derived directly from animals raised and slaughtered from the definition of ‘beef’ and ‘meat.’”<sup>5</sup> And in September 2018, the FDA requested comments about labeling plant-based products with names of dairy foods.<sup>6</sup> Congress, the USDA, and the FDA have not yet taken any major regulatory action, but the same cannot be said for state legislatures.

In August 2018, Missouri became the first state to pass legislation addressing plant-based products.<sup>7</sup> Several state legislatures followed quickly on Missouri’s heels, passing legislation with largely identical prohibitions. Arkansas and Louisiana are two of the additional states that are facing lawsuits for their legislation.<sup>8</sup> Arkansas’s statute<sup>9</sup> prohibits, in pertinent part:

(6) Representing the agricultural product as meat or a meat product when the agricultural product is not derived from harvested livestock, poultry, or cervids;

---

<sup>4</sup> Dairy Pride Act, S. 130, 115th Cong. (2017).

<sup>5</sup> See Petition for the U.S. Cattlemen’s Association at 8, Beef and Meat Labeling Requirements: To Exclude Products Not Derived Directly from Animals Raised and Slaughtered from the Definition of “Beef” and “Meat”, (Pet. 18-01),

<sup>6</sup> Use of the Names of Dairy Foods in the Labeling of Plant-Based Products, 83 Fed. Reg. 49,103, 49,103 (Sept. 28, 2018) (closed for comment Nov. 27, 2018)

<sup>7</sup> MO. ANN. STAT. § 265.494(7) (West 2018), amended by 2018 Mo. Legis. Serv. S.B. 627 & 925.

<sup>8</sup> See *infra*, Part I.B.

<sup>9</sup> See, e.g., ARK. CODE ANN. § 2-1-305 (2019).

(10) Utilizing a term that is the same or similar to a term that has been used or defined historically in reference to a specific agricultural product.

Likewise, Louisiana's statute<sup>10</sup> prohibits:

(4) Representing a food product as meat or a meat product when the food product is not derived from a harvested beef, pork, poultry, alligator, farm-raised deer, turtle, domestic rabbit, crawfish, or shrimp carcass.

(9) Utilizing a term that is the same as or deceptively similar to a term that has been used or defined historically in reference to a specific agricultural product.

Finally, in addition to states passing new legislation, state agencies have initiated enforcement actions against plant-based companies. Specifically, the Milk and Dairy Foods Safety Branch of the California Department of Food and Agriculture issued a letter to Miyoko's Kitchen, stating in part that "[Miyoko's] product cannot bear the name 'Butter' because the product is not butter. 'Butter' is defined in 21 U.S.C. [§] 321a as the food product made exclusively from milk or cream, or both with or without common salt . . . and containing no less than 80 per centum by weight of milk fat."<sup>11</sup>

#### B. First Amendment Litigation by Plant-Based Food Companies

In four current lawsuits, companies that sell plant-based foods claim that state legislation and enforcement actions targeting their labels violate the First Amendment (as incorporated against the states through the Fourteenth Amendment).<sup>12</sup> Although the litigation in Louisiana is newly underway as of October 1, 2020,<sup>13</sup> the litigation in three states has already reached incongruous results, despite the fact that Tofurky is the plaintiff in both cases in the Eighth Circuit—one in the Eastern District of Arkansas and one in the Western District of Missouri.

<sup>10</sup> LA REV. STAT. §4744(4)–(9) (2019).

<sup>11</sup> Miyoko's Kitchen v. Ross, 2020 WL 3:20CV00893, at \*8 (N.D. Cal., Aug 21, 2020).

<sup>12</sup> U.S. Const. amend. I, XIV § 2.

<sup>13</sup> *Tofurky Files First Amendment Challenge Against Louisiana Label Censorship Law*, ALDF.ORG (Oct. 7, 2020), <https://aldf.org/article/tofurky-files-first-amendment-challenge-against-louisiana-label-censorship-law/#:~:text=LOUISIANA%20%E2%80%94%20The%20Good%20Food%20Institute,%E2%80%9Csausage%E2%80%9D%20on%20their%20labels.>

The Arkansas court granted Tofurky's motion for preliminary injunction, finding that Arkansas's statute is likely unconstitutional on the merits,<sup>14</sup> whereas the Missouri court rejected the motion for a preliminary injunction.<sup>15</sup> Meanwhile, in Miyoko's lawsuit against the California Department of Food and Agriculture over the agency's enforcement action, the district court granted the preliminary injunction in part and denied it in part.<sup>16</sup>

In all of these cases, the plaintiffs' primary challenge is that their speech is protected commercial speech, and the states' actions fail intermediate scrutiny.<sup>17</sup> In *Central Hudson Gas & Electric Corporation v. Public Service Commission of New York* (Central Hudson), the Supreme Court established the intermediate scrutiny test for commercial speech.<sup>18</sup> As long as the speech in question does not concern unlawful activity and is not inherently misleading, *Central Hudson* requires that: (1) the government has a substantial interest in prohibiting the speech; (2) the government's regulation directly advances the asserted governmental interest; and (3) the regulation is "not more extensive than is necessary to serve that interest."<sup>19</sup>

As applied to the regulations in question, which prohibit plant-based food labels from bearing words like "beef" and "butter," the government asserts that its interest is in "protecting consumers from confusion."<sup>20</sup> Protecting consumers from confusion is a substantial government interest.<sup>21</sup> Nevertheless, the burden is on the government to demonstrate that its regulations

---

<sup>14</sup> Turtle Island Foods, SPC v. Soman, 2019 WL 7546141, at \*10 (E.D. Ark., Dec. 11, 2019).

<sup>15</sup> Turtle Island Foods, SPC v. Richardson, 2019 WL 7546586, at \*5 (W.D. Mo., Sept. 30, 2019).

<sup>16</sup> Miyoko's Kitchen v. Ross, 2020 WL 3:20CV00893, at \*8 (N.D. Cal., Aug 21, 2020).

<sup>17</sup> I have argued elsewhere that government statutes targeting plant-based food labels should be subject to strict scrutiny because they discriminate based on ideological viewpoints. See Jareb A. Gleckel and Sherry F. Colb, *The Meaning of Meat*, 26 Animal L. Rev. 75, 108 (2020). However, since plaintiffs have brought their challenges under the intermediate scrutiny framework, this paper assumes that courts will apply an intermediate scrutiny test.

<sup>18</sup> *Central Hudson Gas & Elec. Corp. v. Public Serv. Comm'n of N.Y.*, 447 U.S. 557, 566 (1980).

<sup>19</sup> *Id.*

<sup>20</sup> See, e.g., ARK. CODE ANN. § 2-1-301 (2019) ("The purpose of this subchapter is to protect consumers from being misled or confused by false or misleading labeling of agricultural products that are edible by humans.")

<sup>21</sup> See *Zauderer v. Office of Disciplinary Coun. of Sup. Ct. of Ohio*, 471 U.S. 626, 651 (1985) (finding that "preventing deception of customers" is a substantial interest).

directly advance its interest and that the regulations are narrowly tailored.<sup>22</sup> This study examines whether, as an empirical matter, state governments will be able to meet that burden and hypothesizes that they will not.

### C. Prior Studies

#### i. Plant-Based Dairy Literature

To the researcher's knowledge, only one published academic study has examined similar questions.<sup>23</sup> The Feltz study evaluated how accurately consumers identify images of plant-based and animal-based milk and cheese products as being plant or animal-based, respectively, and how accurately they identify nutritional differences between the plant-based and animal-based products. The researchers conducted two preliminary studies about product identification. In the first identification study, they asked 125 participants to distinguish commercially available images of cow's milk from commercially available images of plant-based milks like almond milk, coconut milk, rice milk and soy milk. In the second, they asked a new set of 125 participants to distinguish commercially available images of animal-based cheeses (cheddar cheese, cheese dip, cream cheese, and swiss cheese) from commercially available plant-based cheeses (vegan cheddar cheese, vegan cream cheese, vegan nacho sauce, and vegan cheese slices). The researchers also conducted two preliminary studies about consumers' ability to identify nutritional differences between plant-based and animal-based dairy. In the first "nutrition" study, researchers asked 125 participants to assess the nutritional differences between cow's milk and almond milk by answering questions about which product has more calories, fat, cholesterol, sodium, protein, fiber and sugars. The second nutritional survey asked 134

---

<sup>22</sup> See *Ibanez v. Fla. Dep't of Bus. & Prof'l Regulation*, 512 U.S. 136, 146 (1994); see also *BellSouth Telecommunications, Inc. v. Farris*, 542 F.3d 499, 505 (6th Cir. 2008).

<sup>23</sup> Adam Feltz & Silke Feltz, *Consumer Accuracy at Identifying Plant-based and Animal-based Milk Items*, 4 FOOD ETHICS 85 (2019).

participants to compare the nutritional value of Daiya plant-based cheese and animal-based cheese. Finally, the researchers submitted all of the above questions to a national sample of 1,054 participants. By combining the data for a meta-analysis, the researchers found that consumers could accurately identify plant-based and animal-based milk and cheese products as being plant or animal-based (74%–84% of the time). They also found that consumers were generally accurate at identifying nutritional differences between plant-based and animal-based milk and cheese products (50%–62% accuracy).

The Feltz study provides valuable data. Asking participants to compare images of commercially available products replicates how consumers shop in the real world and therefore suggests high external validity. The replication of findings on a large, national sample also speaks to the strength of the findings. However, there are several limitations to the Feltz study. First, the Feltz study only addressed plant-based milk and cheese; it is silent regarding plant-based meat and even other plant-based dairy such as butter and sour cream. Second, participants knew the purpose of the study as they completed it; this allows for potential bias because participants who support the animal-agriculture industry might feign confusion. Third, by presenting consumers with images, the study does not home in on whether *terms* associated with animal products such as “milk” and “cheese” are a source of consumer confusion, even if consumers can generally distinguish plant-based and animal-based dairy. This question is of primary importance because state statutes explicitly prohibit “[u]tilizing a term that is the same or similar to a term that has been used or defined historically in reference to a specific agricultural product.”<sup>24</sup> Fourth, because researchers used images of commercially available products, it is unclear how accurately the results would map onto products with which consumers

---

<sup>24</sup> ARK. CODE ANN. § 2-1-305(10) (2019); see also, e.g., LA REV. STAT. §4744(9) (2019).

have no familiarity. Finally, the study does not address the impact that omitting terms like “milk” and “cheese” might have on consumer confusion about the taste and uses of plant-based foods.

The present study expands on the existing literature by: (1) asking participants about additional plant-based products, namely plant-based meat products and plant-based butter; (2) concealing the purpose of the study to prevent bias; (3) focusing on the narrow claim that terms like “milk” or “beef”—terms that are traditionally associated with animal products—are a source of consumer confusion about whether products are made from animals and; (4) analyzing whether prohibiting these terms on plant-based food labels would, contrary to the reasoning behind state statutes, actually *increase* consumer confusion about the taste and use of plant-based products.

## ii. Plant-Based Meat Literature

To the researcher’s knowledge, this is the first academic study addressing consumer confusion about plant-based meat. However, it is worth noting that the National Cattlemen’s Beef Association (NCBA) surveyed “over 1800 respondents” and purported to find that “[l]ess than half of consumers understand ‘plant-based beef’ is entirely vegan.”<sup>25</sup> This survey was not part of a controlled study—the NCBA does not present details about its methodology and sample—nor was it published in an academic journal. Nevertheless, taking the study’s findings at face value, the headlines mischaracterize its results.

The NCBA gave consumers four survey options about plant-based meat:

1. Is completely vegan, containing no meat or animal byproducts (eggs, dairy)

---

<sup>25</sup> Meat Substitute Brand Understanding, WWW.NCBA.ORG, <https://www.ncba.org/CMDocs/BeefUSA/Media/NCBA%20Meat%20Substitutes%20Survey.pdf> (last visited Oct 12, 2020); see also National Cattlemen’s Beef Association, *Consumer Research Shows Widespread Confusion About Contents of Plant-Based Fake Meat*, SOUTHEAST AG NET (Feb. 7, 2020), <https://southeastagnet.com/2020/02/07/consumer-research-widespread-confusion-contents-plant-based-fake-meat/>.



2. Does not contain meat but may contain animal byproducts
3. Can contain small amounts of meat, but is primarily plant-based
4. Contains meat and there are no restrictions on the amount

Forty-five percent (45%) of consumers—the largest percentage associated with any of the four choices—selected the first option. They believed that plant-based beef “is completely vegan, containing no meat or animal byproducts (eggs, dairy).” According to the NCBA, these are the only consumers who were “not confused.” The NCBA purported that the thirty-one percent (31%) of consumers who chose the second option, and the seventeen percent (17%) of consumers who chose the third option were confused because they believed, respectively, that plant-based meat “does not contain meat but may contain animal byproducts” or “can contain small amounts of meat, but is primarily plant-based.” Characterizing these consumers as confused is misleading. Consumers who chose the second or third options may well have been acknowledging the possibility of cross-contamination with meat or other animal products, such as foods that cooks have prepared on the same grill or that manufacturers have handled on the same equipment as plant-based beef. To provide an analogy, consumers may heed an allergy warning that reads, “May contain peanuts,” recognizing that a product may contain small quantities of peanuts, but this does not mean those consumers are confused about whether peanuts are an ingredient in the product. The most revealing finding of the NCBA’s survey was that only seven percent (7%) of consumers chose the fourth option: only this small percentage of consumers reported that they believed plant-based meat “contains meat and there are no restrictions on the amount.” Therefore, taking the NCBA’s data at face value, 93% of consumers were not confused.

One goal of the present study is to address the same question as the NCBA's survey—whether consumers think that “plant-based beef” contains cow meat—using the neutral, unbiased questions and scientifically grounded methodologies described below.

## II. Methodology

### A. Participants

The researcher conducted this study using SurveyMonkey and aimed to recruit 150 participants. A total of 308 participants responded to the survey. SurveyMonkey's algorithms estimated that an average participant would need 9 minutes to complete the questionnaire and recommended automatically filtering out all participants who completed the survey in less than 5 minutes. This left a total of 155 participants. Of these participants, ninety-six (96) had been randomly assigned to Group A, whereas fifty-nine (59) had been randomly assigned to Group B.

The sample of participants was largely representative of the United States population: the study included a diverse range of ages, education levels, regions of the country, and neighborhood types. The mean age of participants was fifty-two (52) years old, with a range of twenty-one (21) to seventy-six (76). Approximately two-thirds of participants were female (67.7%) and one-third male (32.3%). Approximately one-third of participants (33.6%) completed high school, approximately forty-one percent (41.3%) completed college, and approximately a quarter (24.5%) completed graduate school. The remainder (0.65%) had not finished high school. Twenty-seven percent (27%) of participants were from urban areas, while forty-eight percent (48%) were from suburban areas and twenty-five percent (25%) were from rural areas. Regarding geographic distribution, nineteen percent (19%) lived in the Western United States, nineteen percent (19%) lived in the Midwest, twenty-five percent (25%) lived in the Southeast, twenty-three percent (23%) lived in the Northeast, and thirteen percent (13%)

lived in the Southwest. Most importantly, only a small percentage of participants (9.7%) were vegetarian, and an even smaller percentage were vegan (3.9%). Moreover, the percentage of vegans and vegetarians in Group A (11.9%) was very similar to that in Group B (14.6%).

#### B. Survey Overview

After Cornell University's Institutional Review Board approved the study, the researcher recruited participants through SurveyMonkey to complete an online questionnaire.<sup>26</sup> The questionnaire concealed the actual purpose of the study from participants to prevent bias. The consent form instructed participants that they were answering questions about their grocery preferences for the purpose of informing grocery stores about how they should stock products. After consenting to complete the study, participants answered eight pages of questions for a total of 45 questions.

The first page presented a series of demographic questions including queries about age, gender, education level, and living environment. The second page included a series of general grocery and food preferences, such as what time of day people prefer to shop, what meal they prefer, and whether they have dietary restrictions or preferences. These questions served as distractors to sell the purported purpose of the study.

Following these two introductory pages, participants answered questions about six different products they might find at a grocery store (one product per page). The first two of these products served as further distractors: (1) Orange-Mango Juice: Fresh Squeezed; and (2) All Natural Peanut and Cashew Granola. They were irrelevant to the data analysis but were incorporated to prevent participants from figuring out that the research was specifically targeting plant-based foods. All participants answered questions about these same two distractor products

---

<sup>26</sup> The entire questionnaire is attached infra as Appendix A.

before answering any questions about plant-based meat or dairy products, and questions about the distractor products focused on the same issues as questions about all other products in the study, namely their ingredients (e.g., “Do you think this product has added sugar?”) and their taste (e.g., “Do you think that drinking this juice tastes like eating a mango?”). Participants also indicated how likely they were to use these products.

All participants also answered one page of experimental questions about a new Tyson product, “Raised and Rooted: Plant-Based Nuggets.”<sup>27</sup> Despite using the qualifier “plant-based,” Tyson’s product differs from typical plant-based foods because it is not made entirely without animal ingredients; one of the ingredients is chicken eggs. The survey asked participants questions about whether they expected Tyson’s product to contain specific ingredients, namely plants, chicken meat, and chicken eggs, to collect preliminary data about whether using animal products in a product labeled “plant-based” misleads consumers. With respect to this product, the researcher hypothesized that, because the product name uses “plant-based” as a qualifier, a majority of participants would correctly assume that it does not contain chicken meat. The researcher also predicted that, because the product uses “plant-based” as a qualifier, a majority of participants would *incorrectly* believe that it does not contain chicken eggs.

The remaining three pages of experimental questions addressed the primary focus of the study using a between-subjects design.

### C. Between-Subjects Design: Experimental and Control Conditions

For the remaining three pages of questions, the study implemented a between-subjects design. Participants were randomly assigned to either Group A or Group B. Both Group A and Group B participants answered questions about three products (one per page). Group A

---

<sup>27</sup> Raised & Rooted, <https://www.raisedandrooted.com> (last visited Oct. 12, 2020).

participants answered questions about: (i) Next-Generation Meat: Plant-Based Beef Burger; (ii) Cultured Vegan Spread; and (iii) Plant-Based Deli Slices: Bologna Style. Group B participants answered questions about (i) Next-Generation Vegetables: Plant-Based Veggie Patty; (ii) Cultured Vegan Butter; and (iii) Sandwich Slices. All product names were imaginary to ensure that brand recognition would not influence the outcome of the study.

Three of these six names (“experimental names”) asked about plant-based products that use words such as “meat,” “beef,” “bologna,” “burger,” and “butter” in the product name—words that are traditionally associated with animal products. The remaining three names (“control names”) asked about the same products but replaced the key terms—the words traditionally associated with animal products—with terms like “spread,” “vegetable,” “veggie” and “patty.” Group A participants answered two pages of questions about products with “experimental” names and one page of questions about a product with a “control” name. Correspondingly, Group B participants answered one page of questions about a product with an “experimental” name and two pages of questions about products with “experimental” names. Participants in Group A and Group B answered the exact same questions, in the exact same order, for corresponding product names. Dividing the “experimental” and “control” questions between the groups helped ensure that any differences between the two groups would not influence the outcome of the study.

The between-subjects questions target two broad issues: (1) When companies use words that are traditionally associated with animal products—words like “beef” and “butter”—on products made without animal ingredients, are consumers confused about whether these products come from animals? (2) If companies do not use these words to help describe their plant-based

products, are consumers more likely to be confused about either (a) the taste or (b) the function of the plant-based products?

The researcher hypothesized broadly that: (1) participants will not be any more likely to think that plant-based foods contain animal products if the names of foods include words that are traditionally associated with animal products than if the names omit these words. (2) If companies do not use these words to help describe their plant-based products, consumers are more likely to be confused about both (a) the taste and (b) the function of the plant-based products.

The following subsections break down the narrow issues that each between-subjects question set addresses, and they present specific hypotheses for each question. In addition to the specific experimental questions discussed below, the questionnaire asked all participants how likely they were to eat or use each product.

i. Plant-Based Beef Burger vs. Plant-Based Vegetable Patty

Participants in Group A answered questions about “Next-Generation Meat: Plant-Based Beef Burger,” whereas Group B participants answered questions about “Next-Generation Vegetables: Plant-Based Veggie Patty.” Both names used the exact same number of words. Whereas Group A’s product used three words traditionally associated with animal products—meat, beef, and burger—Group B’s control replaced those words with “vegetable,” “veggie” and “patty.” Participants answered three questions about the nature of these products: (1) Do you think this product is made from a cow? (2) Do you think that eating this product tastes like eating vegetables? (3) Do you think this product is a good source of protein? The researcher predicted that use of the words “meat,” “beef,” and “burger” would not make participants any more likely to think that a plant-based product was made from a cow. In addition, the researcher predicted

that using these words would help inform consumers that the products were meant to replicate the taste and nutritional characteristics of beef; therefore, consumers would be less likely to think that eating a “plant-based beef burger” tastes like eating vegetables than a “plant-based veggie patty,” and they would be more likely to think that the former is a good source of protein.

ii. Cultured Vegan Butter vs. Cultured Vegan Spread

Participants in Group A answered questions about “Cultured Vegan Spread,” whereas Group B participants answered questions about “Cultured Vegan Butter.” Both names used the exact same number of words, but the experimental condition used the word “butter,” which is traditionally associated with animal products, whereas the control condition used the neutral word “spread.” To assess whether the word “butter” confused participants about whether the product came from an animal, the survey asked the participants: (1) “Do you think this product contains dairy from cows?” To assess whether the word butter helped to inform consumers about the taste of the product, the survey asked: (2) “How well can you imagine what this product tastes like?” To assess if the word butter helped to inform consumers about the function of the product, the survey asked: (3) “Do you think this product would be used for baking biscuits?” (4) “Do you think this product would be used on toast?” (5) “Do you think this product would be used on pasta?”

The researcher predicted that use of the word “butter” would not make participants any more likely to think that a plant-based product was made using dairy from a cow. In addition, the researcher predicted that using the word butter would help inform consumers about the taste and function of the product. Therefore, the researcher hypothesized that participants would be significantly more likely to say they could imagine what “Cultured Vegan Butter” tastes like than that they could imagine what “Cultured Vegan Spread” tastes like. The researcher also

hypothesized that participants would be significantly more likely to think that “Cultured Vegan Butter” could be used on pasta and for baking biscuits than that “Cultured Vegan Spread” could be used for the same. The researcher did not predict any difference for how likely participants were to think that these products could be used on toast.

### iii. Plant-Based Deli Slices: Bologna Style vs. Sandwich Slices

Participants in Group A answered questions about “Plant-Based Deli Slices: Bologna Style,” whereas Group B participants answered questions about “Sandwich Slices.” Several state statutes would prohibit the product name “Plant-Based Deli Slices: Bologna Style” because it uses the word “bologna” (and, arguably, because it uses “deli”). These same states would not prohibit the name “Sandwich Slices” because it does not incorporate words traditionally associated with animal products. The researcher hypothesized that, contrary to the stated purpose of state statutes—preventing consumer confusion—the acceptable name “Sandwich Slices” would be more confusing to consumers than the name “Plant-Based Deli Slices: Bologna Style” because the former provides consumers with less information.

The survey asked two experimental questions: (1) “Do you think this product is made from an animal?” (2) “How well can you imagine what this product tastes like?” The researcher hypothesized that: (1) participants would be significantly more likely to think that “Sandwich Slices” are made from an animal than they are to think that “Plant-Based Deli Slices: Bologna Style” are made from an animal. (2) Participants would be significantly more likely to say that they could imagine what “Plant-Based Deli Slices: Bologna Style” taste like than that they could imagine what “Sandwich Slices” taste like.



#### D. Statistics

Participants answered all questions on a scale of 1–5. For questions about the products' ingredients (e.g., “Do you think that this product comes from a cow?”), the scale was: (1) Very Unlikely, (2) Unlikely, (3) Neither Likely or Unlikely, (4) Likely, (5) Very Likely. For questions pertaining to taste (e.g., “How well can you imagine what this product tastes like?”), the scale was: (1) Not at all clearly, (2) Not so clearly, (3) Somewhat clearly, (4) Very Clearly, (5) Extremely Clearly. For questions pertaining to nutrition (e.g., “Do you think this product is a good source of protein?”) the scale was: (1) Far Below Average, (2) Below Average, (3) Average, (4) Above Average, (5) Far Above Average. Finally, for one question, (“Do you think this product tastes like eating vegetables?”), the scale was: (1) Not at all, (2) A little, (3) A moderate amount, (4) A lot, (5) A great deal. For each question, the researcher used t-tests to compare the means in the experimental and control conditions.

### III. Results

#### A. Plant-Based Beef Burger vs. Plant-Based Vegetable Patty

As hypothesized, participants were no more likely to think that “Next-Generation Meat: Plant-Based Beef Burger” was made from a cow ( $M = 0.49$ ,  $SD = 0.67$ ) than to think that “Next-Generation Vegetables: Plant-Based Veggie Patty” was made from a cow ( $M = 0.51$ ,  $SD = 0.57$ ),  $t(153) = 0.15$ ,  $p = .88$ . The vast majority of participants thought it was either very unlikely (66.1%) or unlikely (22%) that “Next Generation Meat: Plant-Based Beef Burger” came from a cow. Only one participant (1.69%) thought that it was either likely or very likely. The same was true for “Next Generation Vegetables: Plant-Based Veggie Patty.” The vast majority of participants thought it was either very unlikely (61.5%) or unlikely (29%) that this product was made from a cow.

Also as hypothesized, significantly fewer participants thought that eating “Next-Generation Meat: Plant-Based Beef Burger” would taste like eating vegetables ( $M = 1.05$ ,  $SD = 1.05$ ) than that eating “Next Generation Vegetables: Plant-Based Veggie Patty” would taste like eating vegetables ( $M = 1.542$ ,  $SD = 1.09$ ),  $t(153) = 2.86$ ,  $p = .005$ . Approximately thirty-nine percent (38.98%) of participants thought that eating “Next-Generation Meat: Plant-Based Beef Burger” would taste “Not at All” like eating vegetables, whereas under seventeen percent (16.67%) thought that eating “Next-Generation Vegetables: Plant-Based Veggie Patty” would not taste at all like eating vegetables.

Unexpectedly, there was no significant difference between the percentage of participants who thought that “Next-Generation Meat: Plant-Based Beef Burger” would be a good source of protein ( $M = 2.85$ ,  $SD = 0.76$ ) and those who thought that “Next-Generation Vegetables: Plant-Based Veggie Patty” would be a good source of protein ( $M = 2.75$ ,  $SD = 0.55$ ),  $t(153) = 0.79$ ,  $p = 0.43$ . A majority of participants thought that both “Plant-Based Beef Burgers” and “Plant-Based Veggie Patties” would be “Average” to “Above Average” sources of protein.

Finally, there was a fairly even distribution of how likely participants were to eat this product (Very Likely = 13.56%; Likely = 20.34%; Neither Likely nor Unlikely = 16.95%; Unlikely = 22.03%; Very Unlikely = 27.12%).

#### B. Cultured Vegan Butter vs. Cultured Vegan Spread

As predicted, there was no significant difference between the percentage of participants who thought that “Cultured Vegan Butter” contained dairy from a cow (Mean = 0.71,  $SD = 0.99$ ) and the percentage that thought “Cultured Vegan Spread” contained dairy from a cow (Mean = 0.92,  $SD = 1.49$ ),  $t(153) = 1.15$ ,  $p = 0.25$ . Participants, on average, thought that it was “Unlikely” or “Very Unlikely” that either product contained dairy from a cow. The only

unexpected twist was that, although this difference was not statistically significant, an even higher percentage of participants understood that “Cultured Vegan Butter” did not have dairy from a cow than understood that “Cultured Vegan Spread” did not have dairy from a cow.

Also as hypothesized, significantly more participants could imagine the taste of “Cultured Vegan Butter” ( $M = 4.14$ ,  $SD = 0.98$ ) than could imagine the taste of “Cultured Vegan Spread” ( $M = 3.52$ ,  $SD = 1.26$ ),  $t(153) = 3.46$ ,  $p < .001$ . Participants on average ranked how well they could imagine what “Cultured Vegan Butter” tastes like between “Very Clearly” and “Extremely Clearly;” by contrast, participants on average ranked how well they could imagine what “Cultured Vegan Spread” tastes like between “Somewhat Clearly” and “Very Clearly.”

Regarding use, three tests assessed how well participants could envision the use of the product based on its name. As hypothesized, significantly more participants understood that “Cultured Vegan Butter” could be used on pasta ( $M = 2.98$ ,  $SD = 1.02$ ) than “Cultured Vegan Spread” ( $M = 2.41$ ,  $SD = 1.17$ ),  $t(153) = 3.31$ ,  $p < .001$ . Likewise, significantly more participants understood that “Cultured Vegan Butter” could be used for baking biscuits ( $M = 2.64$ ,  $SD = 1.20$ ) than “Cultured Vegan Spread” ( $M = 1.89$ ,  $SD = 0.62$ ),  $t(153) = 5.36$ ,  $p < .001$ . On average, participants thought it was “Likely” that “Cultured Vegan Butter” could be used on pasta or for baking biscuits, but they thought it was “Neither Likely nor Unlikely” that “Cultured Vegan Spread” could be used on pasta or for baking biscuits. Also as hypothesized, there was no significant difference between the percentage of participants who thought that “Cultured Vegan Butter” ( $M = 3$ ,  $SD = 0.58$ ) and “Cultured Vegan Spread” ( $M = 3.11$ ,  $SD = 0.63$ ) could be used on toast,  $t(153) = 0.88$ ,  $p = .38$ . On average, participants thought it was “Likely” that both products could be used on toast.

Finally, when asked how likely they were to eat “Cultured Vegan Butter,” participants reported the following: Very Likely = 9.38%; Likely = 21.88%; Neither Likely nor Unlikely = 14.58%; Unlikely = 15.63%; Very Unlikely = 38.54%.

#### C. Plant-Based Deli Slices: Bologna Style vs. Sandwich Slices

As hypothesized, participants were significantly less likely to think that “Plant-Based Deli Slices: Bologna Style” are made from an animal ( $M = 0.81$ ,  $SD = 1.33$ ) than to think that “Sandwich Slices” are made from an animal ( $M = 2.72$ ,  $SD = 1.17$ ),  $t(153) = 10.38$ ,  $p < .001$ . A majority of participants thought that it was “Very Unlikely” that “Plant-Based Deli Slices: Bologna Style” came from an animal; in stark contrast, the majority of participants thought it was “Likely” that “Sandwich Slices” came from an animal.

Regarding taste, a significantly higher percentage of participants could imagine the taste of “Plant-Based Deli Slices: Bologna Style” ( $M = 2.83$ ,  $SD = 0.97$ ) than could imagine the taste of “Sandwich Slices” ( $M = 2.39$ ,  $SD = 0.96$ ),  $t(153) = 2.74$ ,  $p = .003$ . A majority of participants could imagine “Somewhat Clearly” what “Plant-Based Deli Slices: Bologna Style” taste like, whereas the majority of participants could “Not So Clearly” imagine what “Sandwich Slices” taste like.

Finally, when asked how likely they were to eat “Plant-Based Deli Slices: Bologna Style,” participants reported the following: Very Likely = 6.78%; Likely = 13.56%; Neither Likely nor Unlikely = 13.56%; Unlikely = 22.03%; Very Unlikely = 44.07%.

#### D. Raised and Rooted: Plant-Based Nuggets

As hypothesized, a majority of participants correctly thought that the product “Raised and Rooted: Plant-Based Nuggets” was “Very Unlikely” or “Unlikely” to contain chicken meat

(78.07%), and a majority of participants *incorrectly* thought that it was “Very Unlikely” or “Unlikely” to contain chicken eggs (67.74%).

#### IV. Conclusion

State statutes, such as those in Arkansas and Louisiana, prohibit companies from “[u]tilizing a term that is the same or similar to a term that has been used or defined historically in reference to a specific agricultural product.”<sup>28</sup> The states argue that using such terms will confuse consumers. This controlled study demonstrates that the opposite is true.

The results show that: (1) consumers are no more likely to think that plant-based products come from an animal if the product names incorporate words traditionally associated with animal products than if they do not. (2) Omitting words that are traditionally associated with animal products from the names of plant-based products actually *increases* consumer confusion about the taste and uses of these products, although it does not impact consumers’ understanding of the products’ nutritional attributes. Finally, this study provides strong, preliminary evidence that, because consumers expect “plant-based” products will not have any animal products, using chicken eggs in products labeled “plant-based” is misleading to consumers.

##### A. Consumers Are No More Likely to Think That Plant-Based Products Come from an Animal if the Product’s Name Incorporates Terms Traditionally Associated with Animal Products.

Consumers are no more likely to think that plant-based products come from an animal if the products’ names incorporate words traditionally associated with animal products. The study first compared “Next Generation Meat: Plant-Based Beef Burger” to “Next-Generation Vegetables: Plant-Based Veggie Patty.” Replacing the words “meat,” “burger,” and “burger,” with the words “vegetables,” “veggie” and “patty,” had no impact on how likely participants

---

<sup>28</sup> ARK. CODE ANN. § 2-1-305(10) (2019); see also, e.g., LA REV. STAT. §4744(9) (2019).

were to think that the product came from a cow. Comparing “Cultured Vegan Butter” to “Cultured Vegan Spread” (replacing the term “butter” with “spread”) replicated this finding. Finally, comparing “Plant-Based Deli Slices: Bologna Style” to the less descriptive name “Sandwich Slices” revealed that using the term “bologna” alongside the descriptors “plant-based” and “style” was significantly *less* confusing to consumers than omitting the term altogether. In this instance, “[u]tilizing a term that is the same or similar to a term that has been used or defined historically in reference to a specific agricultural product” did not create consumer confusion, but rather reduced it.

B. Omitting Terms that are Traditionally Associated with Animal Products from the Names of Plant-Based Products Confuses Consumers about their Taste and Uses, but it Does Not Impact their Perception of the Products’ Nutrition.

“Utilizing a term that is the same or similar to a term that has been used or defined historically in reference to a specific agricultural product”<sup>29</sup> also *reduced* consumer confusion with respect to the taste and use of the product. Directly undermining the purported purpose of statutes that prohibit using terms like “beef” or “butter” on plant-based products, the results showed that incorporating these terms *helped* consumers to “imagine what the products taste like” and understand the different uses of the product. Participants imagined that eating a plant-based burger would taste less like eating vegetables when the name of the product was “Plant-Based Beef Burger” than when it was “Plant-Based Veggie Patty.” Participants were significantly more likely to say that they could imagine the taste of “Cultured Vegan Butter” than “Cultured Vegan Spread;” they also could imagine the taste of “Plant-Based Deli Slices: Bologna Style” significantly more readily than they could “Sandwich Slices.” Finally,

---

<sup>29</sup> ARK. CODE ANN. § 2-1-305(10) (2019).

participants were significantly more likely to recognize that they could use “Cultured Vegan Butter” on pasta and for baking biscuits as compared to “Cultured Vegan Spread.”

Against the researcher’s hypothesis, the findings did not show that using the terms “beef” and “meat” had any impact on consumers’ perceptions of the amount of protein in a product. The researcher expected that terms like “beef” would convey to consumers that a product was replacing beef and therefore had nutritional attributes similar to those of beef, such as being an above average source of protein. The results, however, suggest that because consumers understood the plant-based products contained no actual beef, the word “beef” was not indicative of the nutritional characteristics of the food product.

C. Consumers Expect that “Plant-Based” Products Will Not Contain Any Animal Products, so Including Eggs in Products Labeled “Plant-Based” is Misleading.

Finally, whereas incorporating words like “beef” or “butter” in the names of plant-based products does not mislead consumers about the products’ ingredients, the results demonstrate that labeling products as plant-based *does* give consumers the impression that a food item will not contain any animal products. Participant responses to questions about Tyson’s new product, “Raised and Rooted: Plant-Based Nuggets,” revealed that a large majority of consumers expect that plant-based products will not contain chicken eggs. Although more extensive research could expand upon this finding, the results provide strong, preliminary evidence that if a company labels a product “plant-based,” using animal ingredients such as chicken eggs in the product will be misleading to consumers in the absence of clear disclosures.

D. Strengths and Limitations

This study incorporated several specific measures to prevent bias, and the results confirm the lack of bias in the sample. First, as noted above, the researcher recruited participants through SurveyMonkey rather than through a university to ensure that participants accurately represented



the full adult population of the United States. It is possible that younger participants, specifically college students in more liberal areas like the northeast, would be more aware of new products like plant-based meat and dairy. Therefore, the study ensured that the population included participants from every area of the country, and with a range of educational backgrounds and ages.

Second, every participant in Group A answered two experimental questions and one control question while every participant in Condition B answered one experimental question and two control questions. By assigning both experimental and control questions to participants in each group, the survey further ensured that between-group differences did not dictate the outcome of the study. If, for example, Group A participants were inherently less susceptible to confusion than Group B participants, then the results for “Cultured Vegan Butter vs. Cultured Vegan Spread” (where Group A participants were the control group) would have undermined the findings of “Plant-Based Beef Burger vs. Plant-Based Veggie Patty” (where Group A participants were in the experimental condition). As expected, the results were consistent regardless of whether Group A or Group B served as the control condition.

Third, the study incorporated deception so that participants would not know that it was specific to plant-based foods. In addition to using a consent form that told participants the study was for market research about grocery preferences, the study incorporated distractor questions. The study included full pages of questions about products that were not specifically plant-based, and it also included questions about each plant-based product that were not specific to whether or not the product was plant-based.

Fourth, all products used imaginary names so that name-brand recognition would not impact the findings. If the study had used “Impossible Burger,” for example, participants who

might typically be confused about whether the term “burger” indicates that a product has animal ingredients might nonetheless recognize the product name and therefore know that it is a vegan product. The study avoided this confounding variable.

Fifth, the sample had a very low percentage of vegans and vegetarians, and there was an equal distribution of vegans/vegetarians in each between-subjects condition. This demonstrates that the sample did not simply consist of participants who were already familiar with the nature of plant-based products and supportive of such products.

Finally, many participants said that they were very unlikely to eat or use the plant-based products. In fact, a majority of participants said they were either “Unlikely” or “Very Unlikely” to eat any of the plant-based foods. Despite having no interest in the plant-based products, the vast majority of these same participants still understood that these foods were not made using animal products. This finding clarifies that the study was not influenced by a sample of participants who already eat plant-based foods and who thus had preconceived understandings that plant-based foods do not contain animal ingredients.

The main limitation of this study is the sample size. Although the significance values indicate compelling results, replication on larger samples, and in real-world applications, would provide further external validity. Additionally, two-thirds of the sample was female. Although there is no reason to expect that males would perform differently than females, additional studies could aim to replicate findings with a larger male sample. Finally, the last component of the study provides only a preliminary finding that if companies use eggs in products that they label “plant-based,” these companies will be misleading consumers. A full, controlled study should address whether all “plant-based” labels are misleading to consumers if the products contain

animal ingredients, or whether some of these product labels contain adequate disclosures to inform consumers about their blended animal and plant ingredients.

E. Legal Implications

For government legislation to survive intermediate scrutiny, the legislation must directly advance an important government interest. States have an important interest in preventing consumer confusion. Nevertheless, the findings of this study show that plant-based food labels such as “Plant-Based Beef” and “Vegan Butter” do not confuse consumers about whether the products contain animal ingredients. On the contrary, removing terms like “beef” and “butter”—terms that people traditionally associate with animal products—from plant-based food labels confuses consumers about the taste and use of plant-based products. Therefore, government regulations prohibiting companies from labeling plant-based foods with terms “that [are] the same or similar to a term that has been used or defined historically in reference to a specific agricultural product”<sup>30</sup> do not advance an important government interest and should be held unconstitutional.

---

<sup>30</sup> ARK. CODE ANN. § 2-1-305 (2019).